

FIG. 1

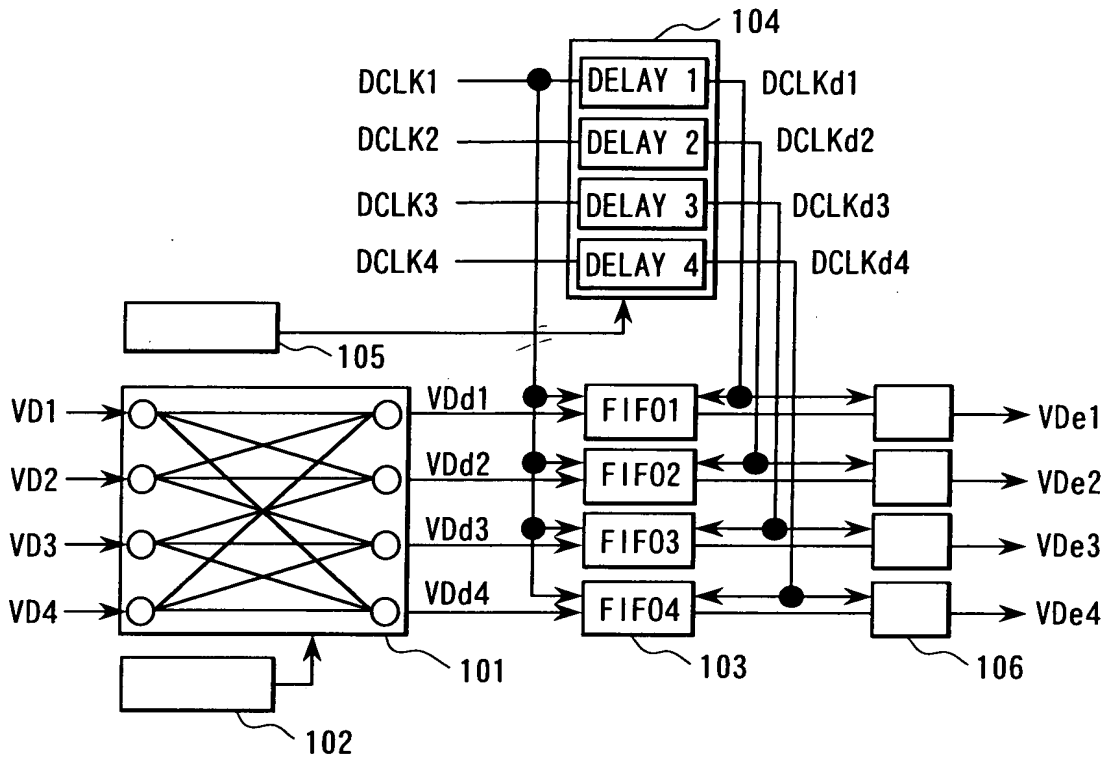


FIG. 2

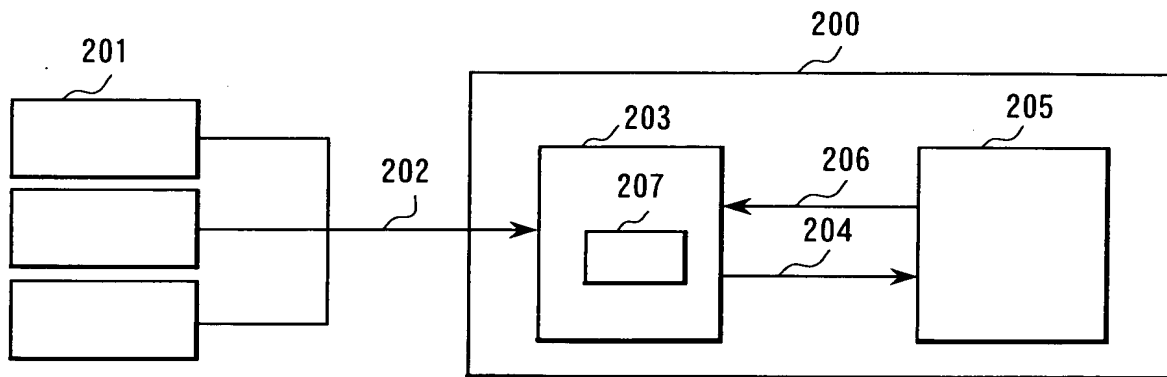


FIG.3

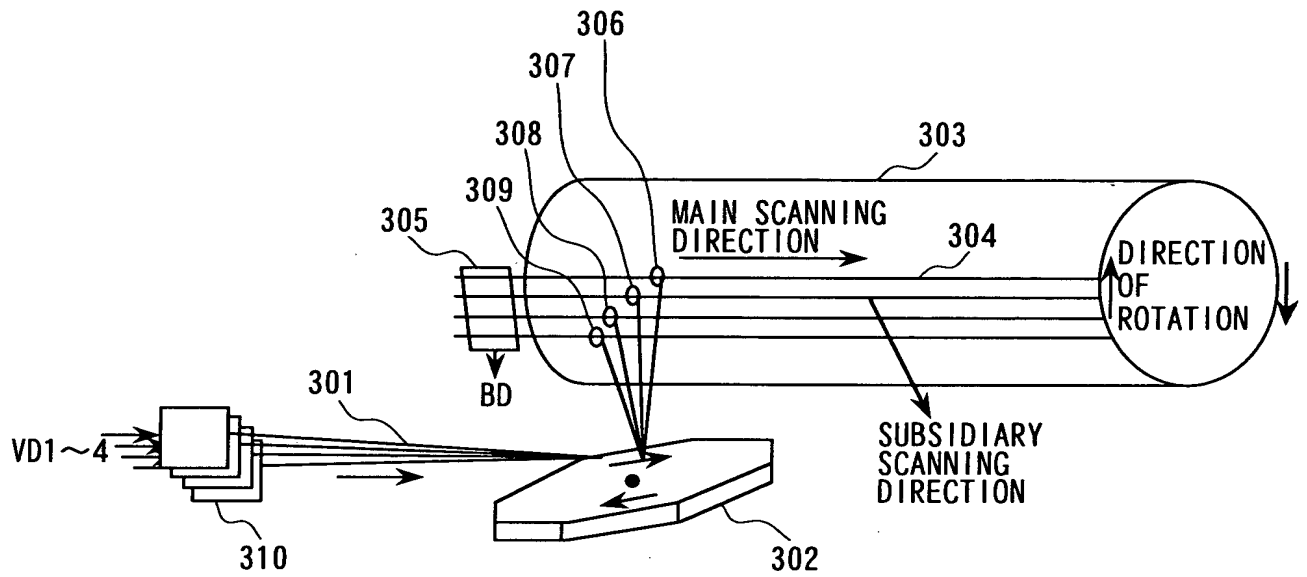


FIG.4

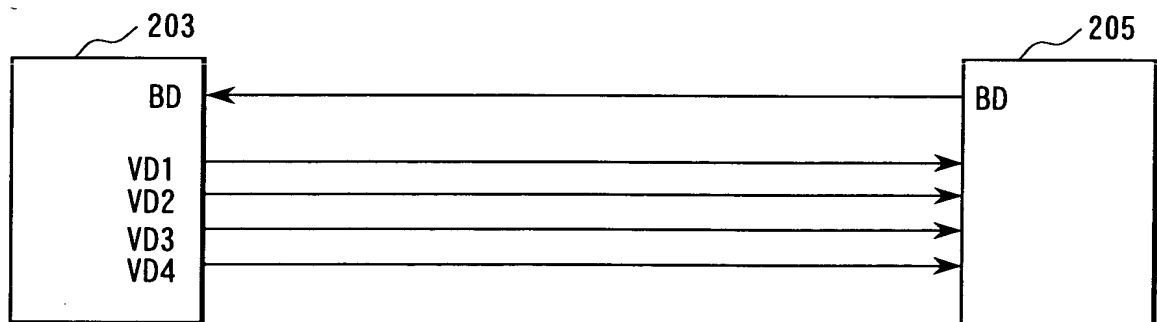


FIG.5

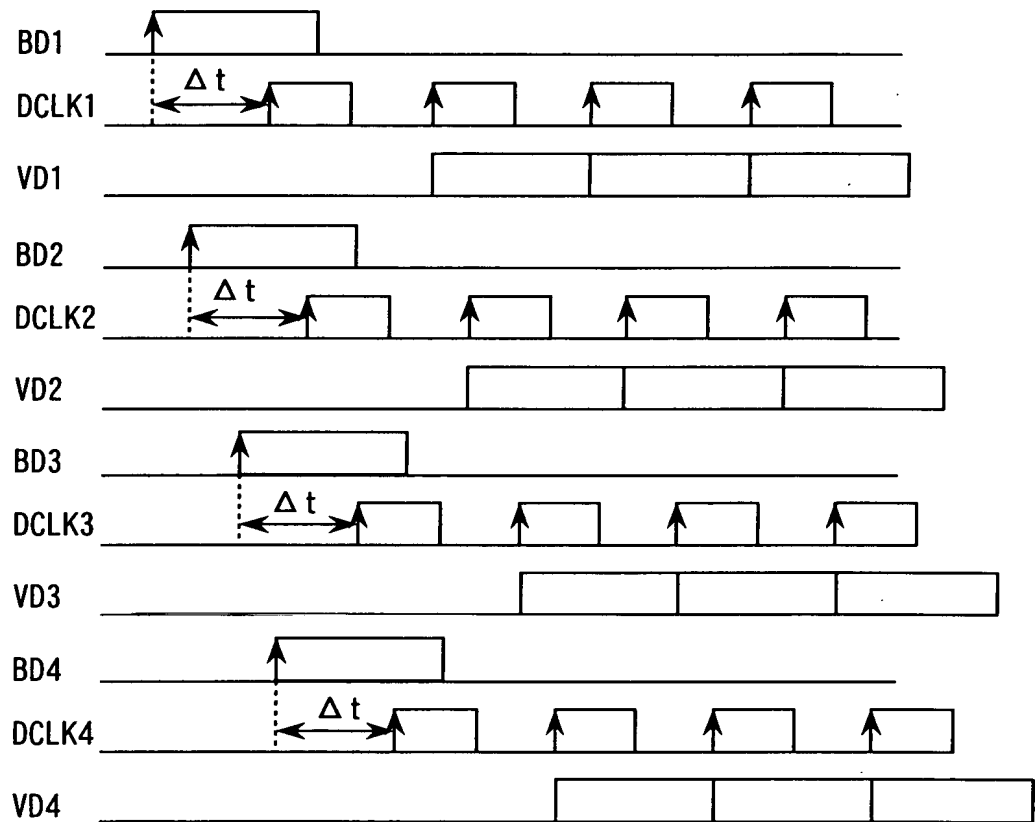
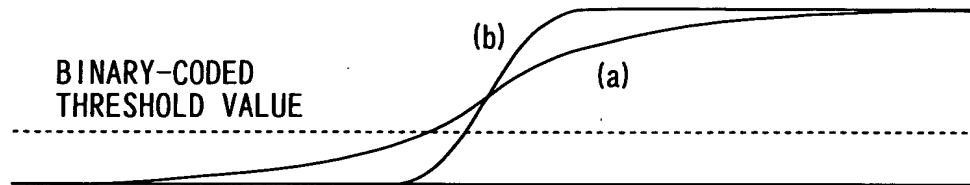


FIG.6

(1) ANALOG OUTPUT



(2) BINARY-CODED OUTPUT

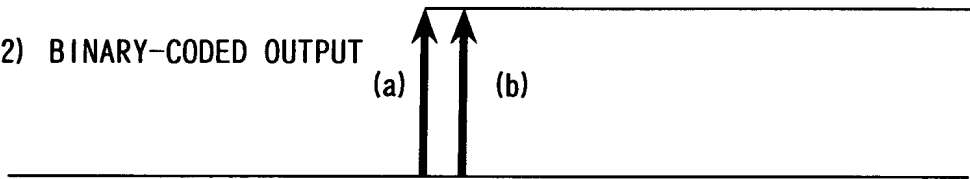
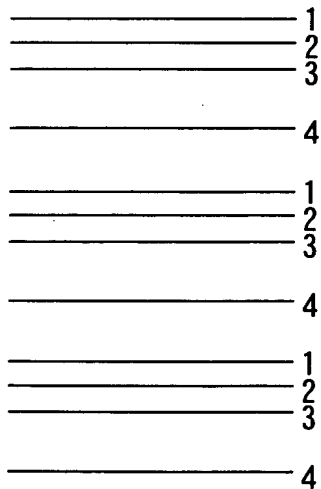


FIG.7

(1)



(2)

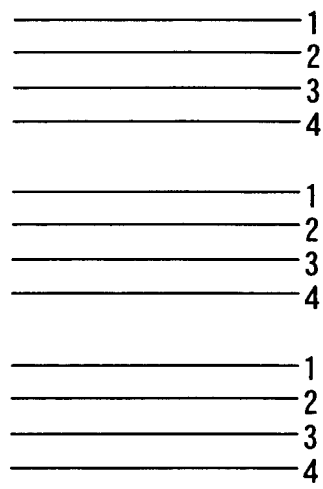


FIG.8

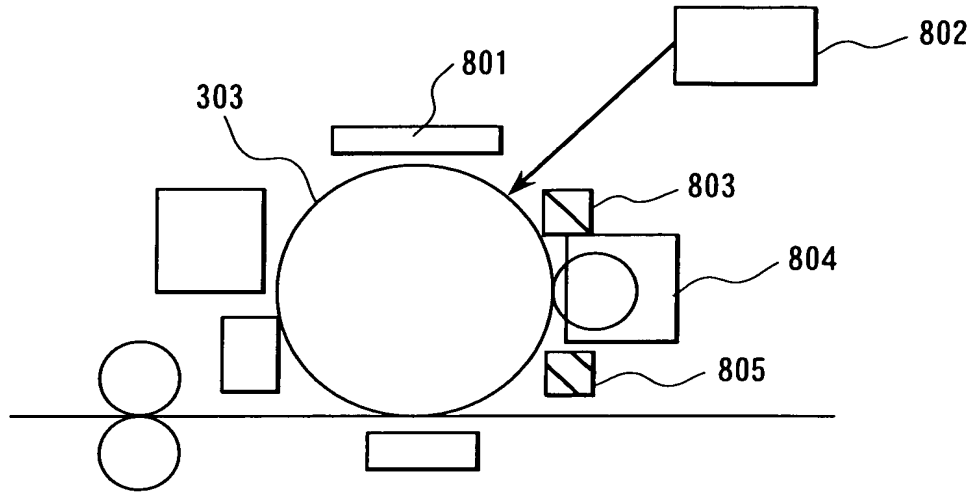


FIG.9

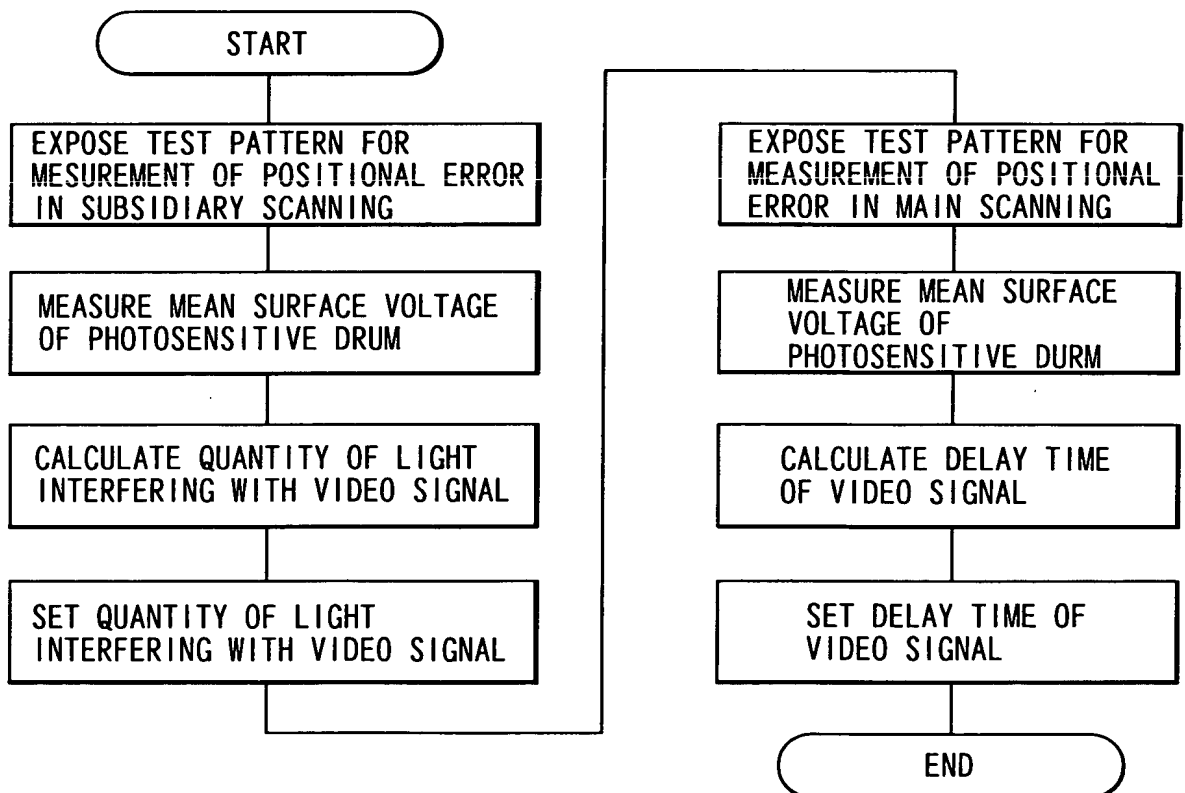


FIG.10


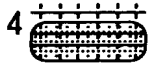

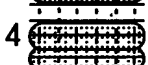


MAIN SCANNING PITCH	TEST PATTERN	MEAN SURFACE VOLTAGE	RATIO OF EXPOSED AREA	OPTICAL DENSITY
A NARROW 32um	1  32um 4 	-300V	56%	0.36
B STANDARD 42um	1  42um 4 	-250V	63%	0.43
C WIDE 53um	1  53um 4 	-220V	69%	0.51

FIG.11

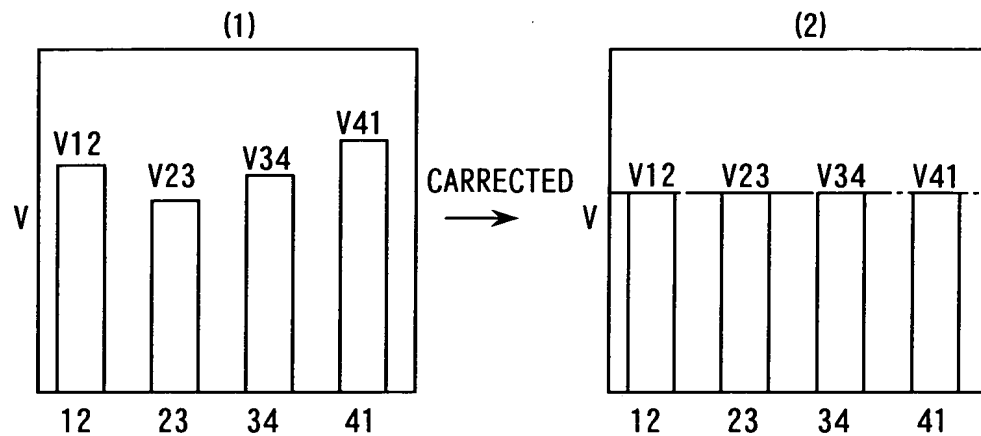


FIG.12

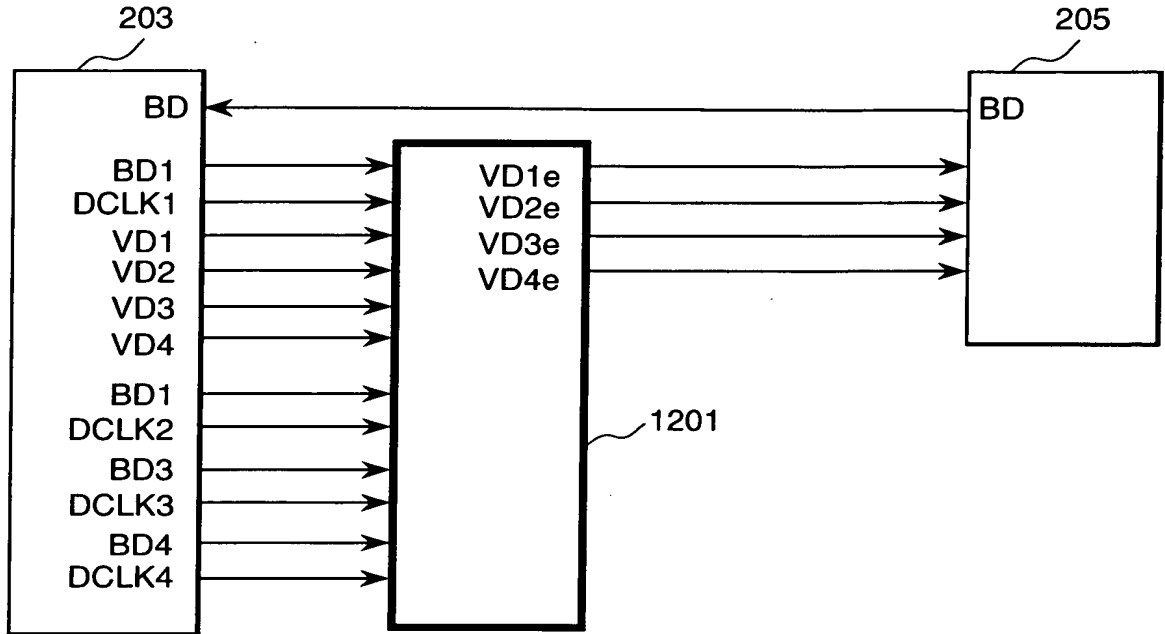
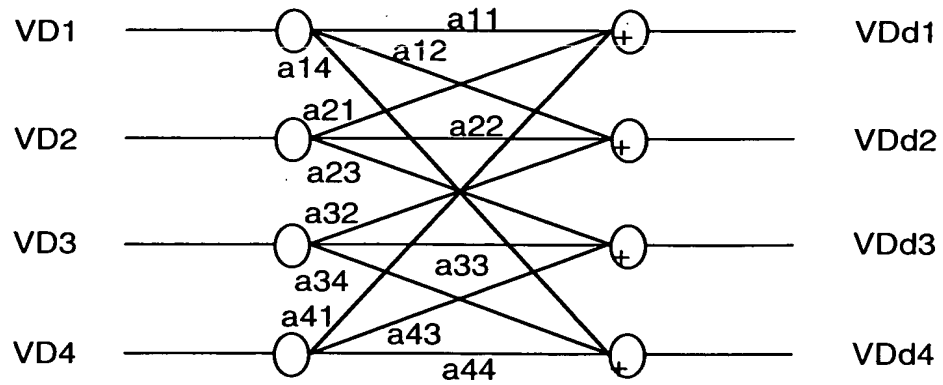


FIG.13



$$\begin{pmatrix} VDd1 \\ VDd2 \\ VDd3 \\ VDd4 \end{pmatrix} = A \begin{pmatrix} VD1 \\ VD2 \\ VD3 \\ VD4 \end{pmatrix} \quad A = \begin{pmatrix} a11 & a21 & 0 & a41 \\ a12 & a22 & a32 & 0 \\ 0 & a23 & a33 & a43 \\ a14 & 0 & a34 & a44 \end{pmatrix}$$

FIG. 14

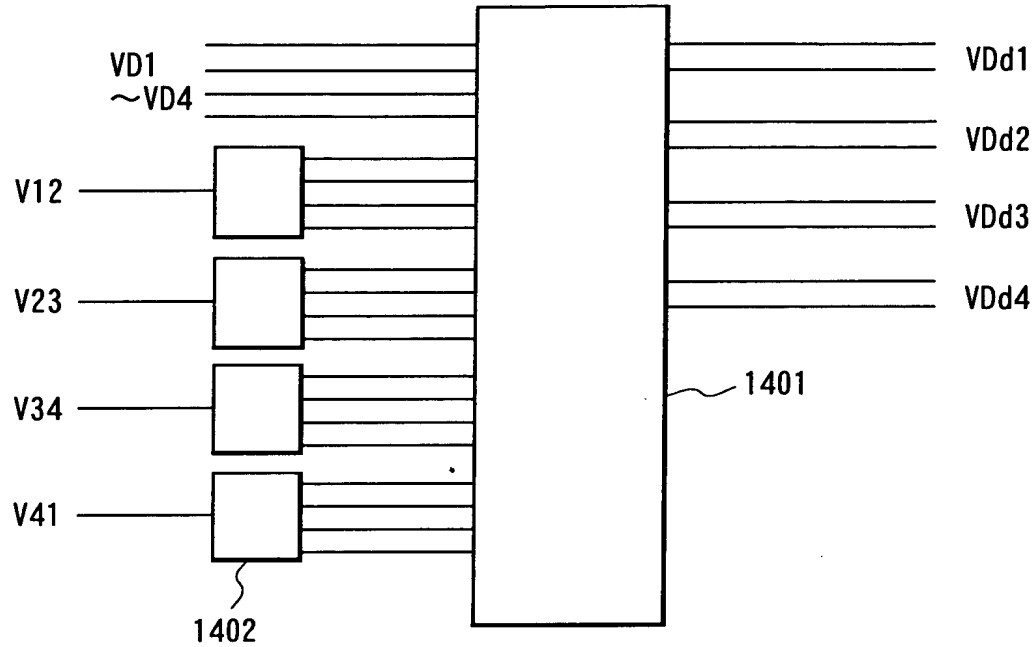


FIG. 15(1)

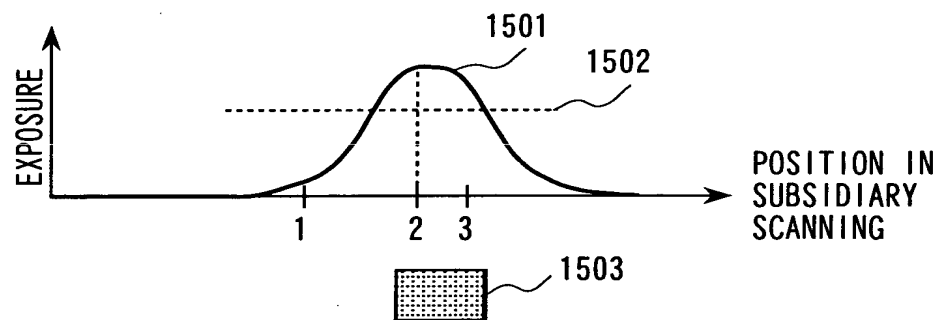


FIG. 15(2)

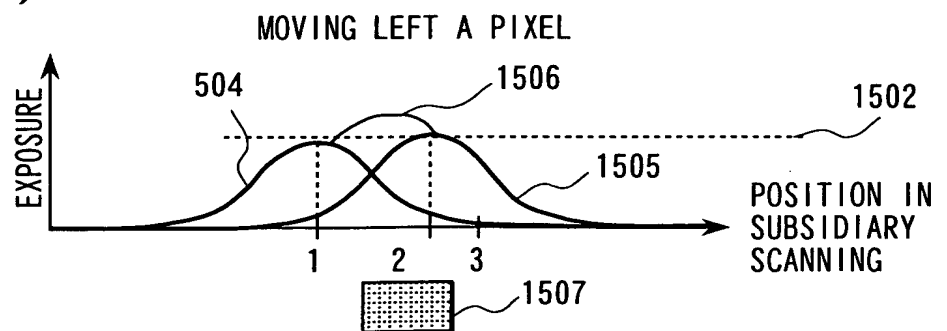




FIG.16

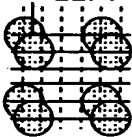
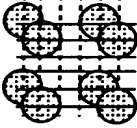
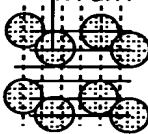
SPOT POSITION	TEST PATTERN	RATIO OF EXPOSED AREA	MEAN SURFACE VOLTAGE	OPTICAL DENSITY
A LEFTWARD 20 $\mu$ m	LEFT 20 $\mu$ m 	31%	-400V	0.16
B STANDARD 0 $\mu$ m		35%	-360V	0.19
C RIGHTWARD 20 $\mu$ m	RIGHT 20 $\mu$ m 	39%	-320V	0.21

FIG.17

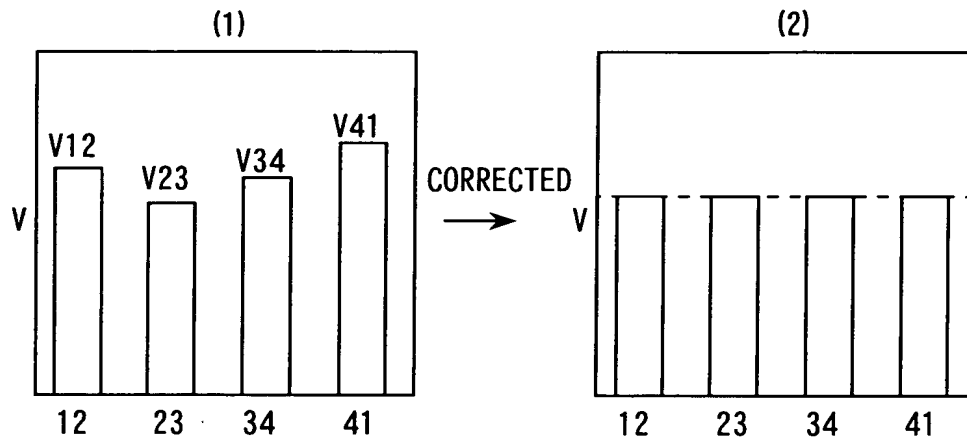


FIG.18

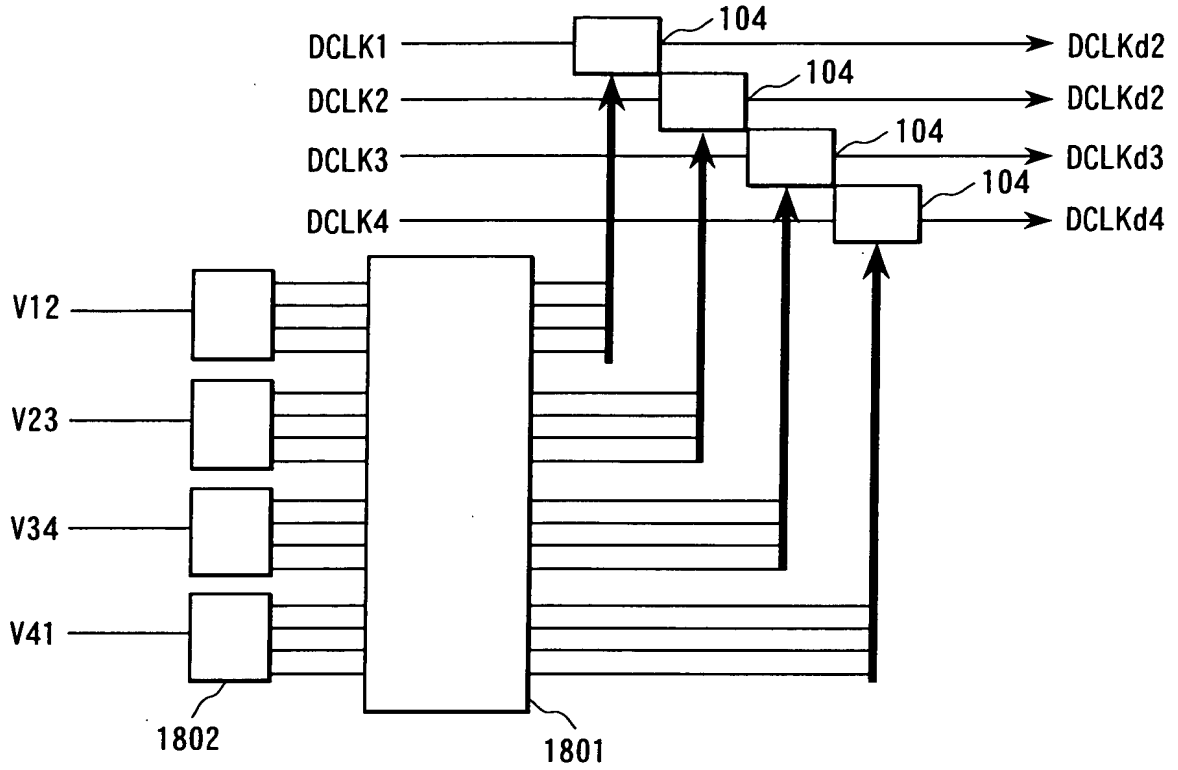


FIG.19(1)

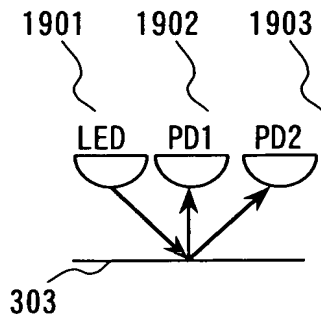


FIG.19(2)

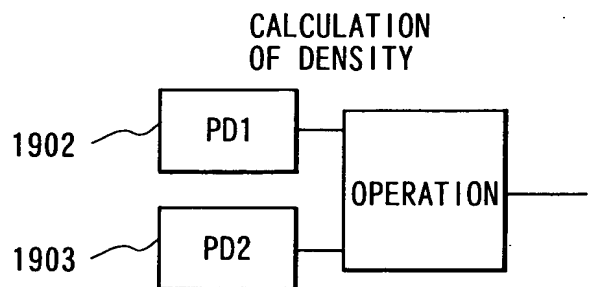


FIG.20

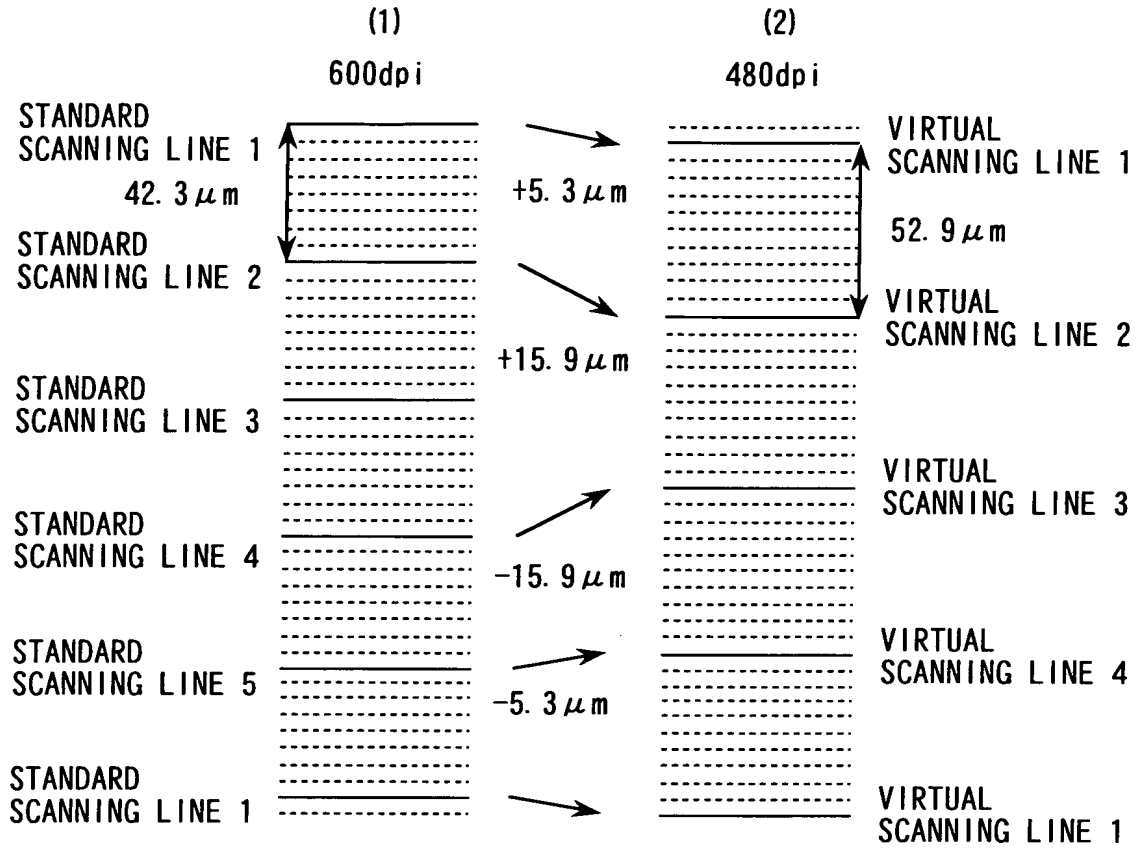


FIG.21

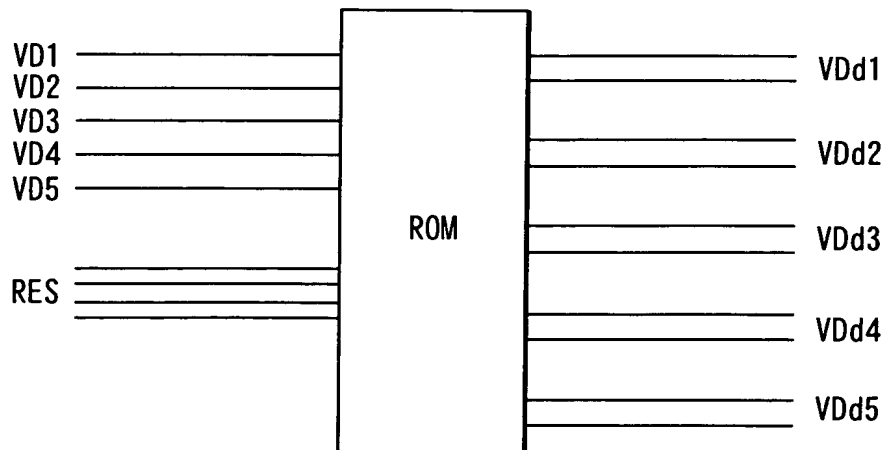


FIG.22(1)

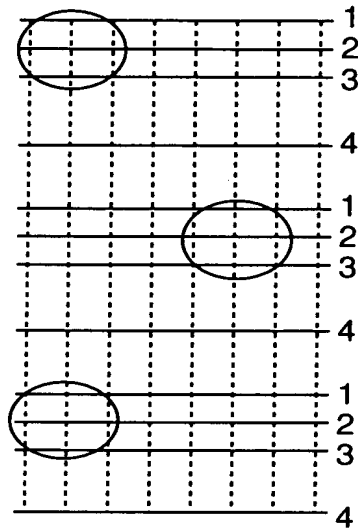


FIG.22(2)

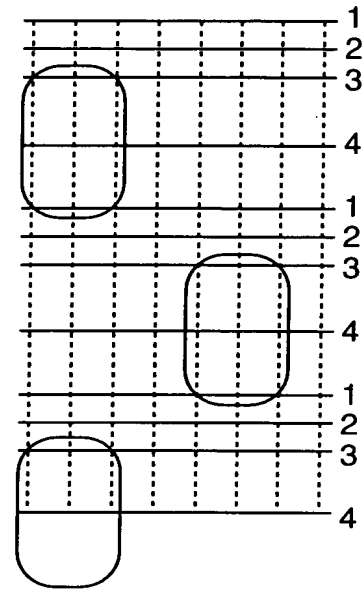


FIG.25

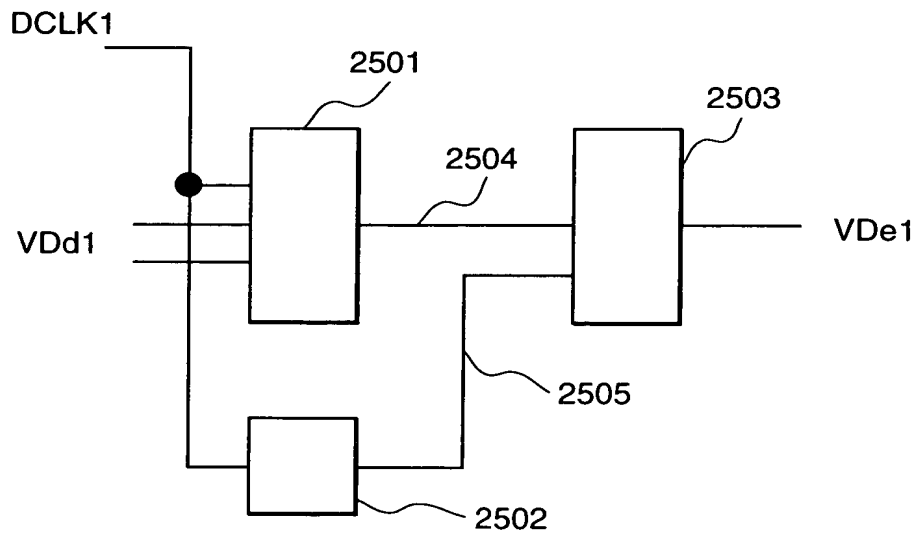


FIG.23

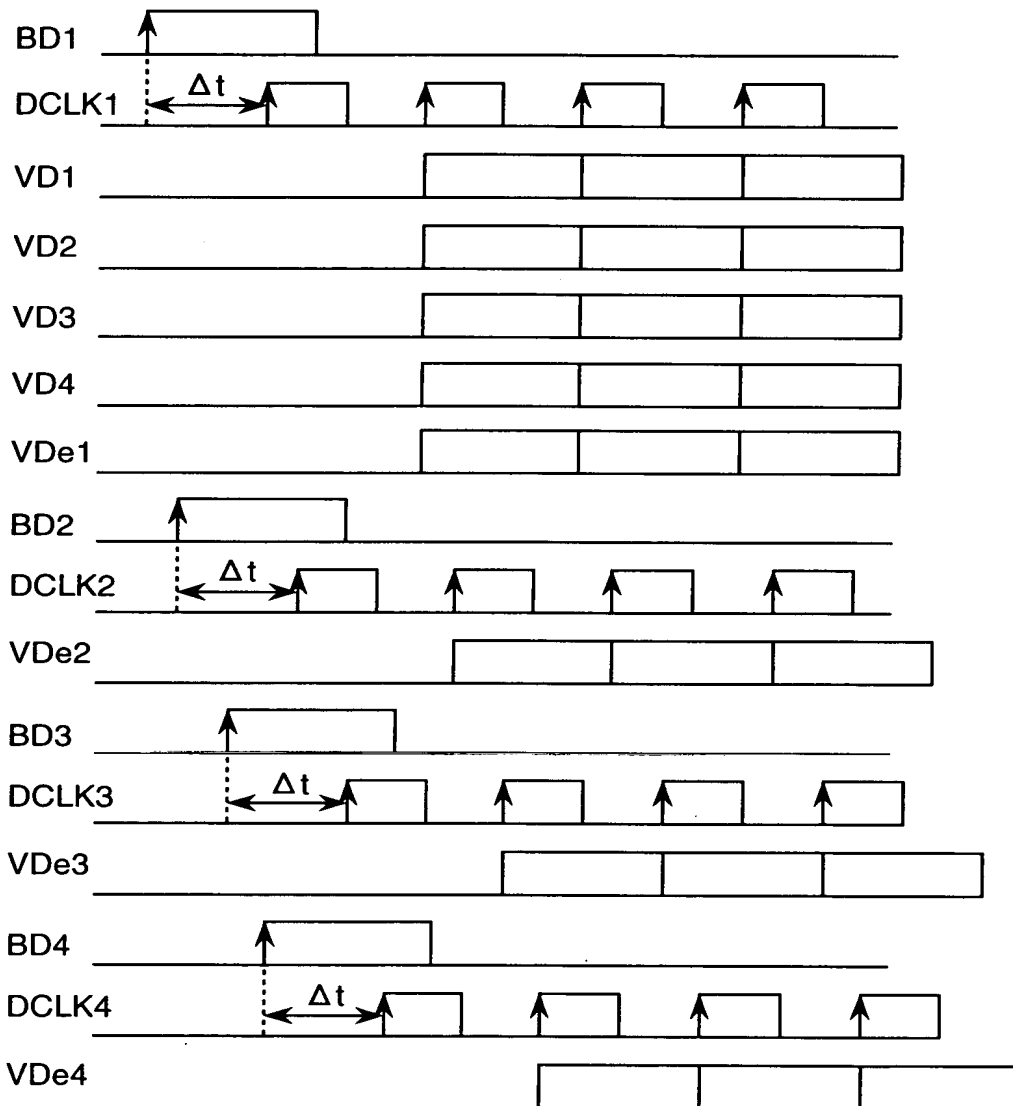
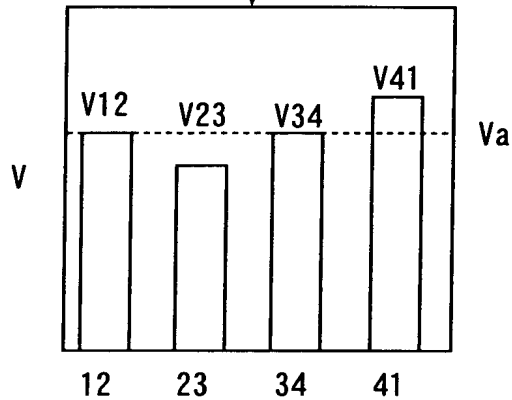


FIG.24

(1) MEASURING  
POTENTIALS



(2) SETTING THE QUANTITY OF  
INTERFERING LIGHTS

$V_{23} < V_a$

WHEN THE DISTANCE BETWEEN SCANNING  
LINES 2 AND 3 IS GREATER

QUANTITY OF CORRECTION  $d_{23} = V_a - V_{23}$

COEFFICIENTS  $a_{23} = a_{23} + k_1 \times d_{23}$

$a_{32} = a_{32} + k_1 \times d_{23}$

$a_{22} = a_{22} - k_2 \times d_{23}$

$a_{33} = a_{33} - k_2 \times d_{23}$

$V_{41} < V_a$

WHEN THE DISTANCE BETWEEN SCANNING  
LINES 2 AND 3 IS GREATER

QUANTITY OF CORRECTION  $d_{23} = V_a - V_{23}$

COEFFICIENTS  $a_{23} = a_{23} + k_1 \times d_{23}$

$a_{32} = a_{32} + k_1 \times d_{23}$

$a_{22} = a_{22} - k_2 \times d_{23}$

$a_{33} = a_{33} - k_2 \times d_{23}$

REPEAT IF  
NECESSARY

FIG.26

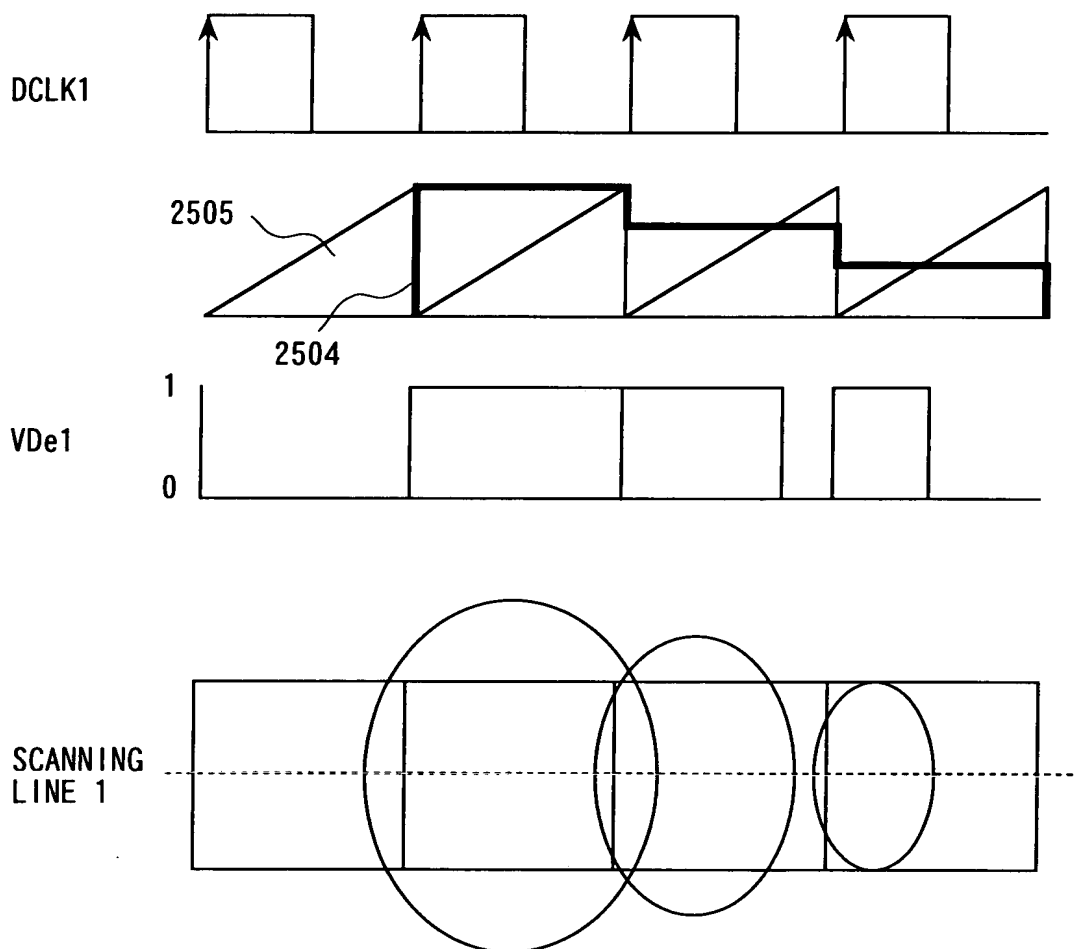
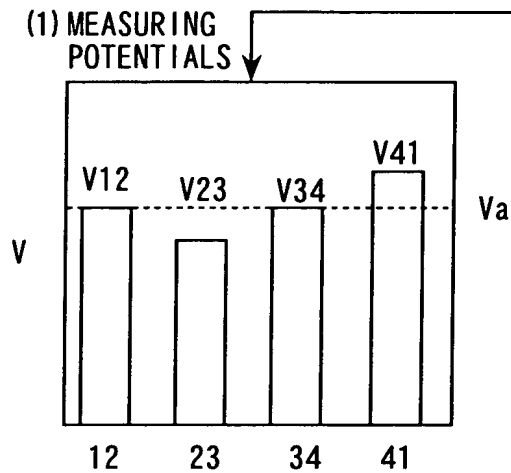


FIG.27



REPEAT IF  
NECESSARY

(2) SETTING A DELAY TIME

$$V23 < V_a$$

WHEN SPOT 3 IS TO THE RIGHT OF SPOT 2  
QUANTITY OF CORRECTION  $d23 = V_a - V23$

$$\text{TIME } t2 = t2 + k1 \times d23$$

$$t3 = t3 - k1 \times d23$$

$$V41 > V_a$$

WHEN SPOT 4 IS TO THE RIGHT OF SPOT 1  
QUANTITY OF CORRECTION  $d41 = V41 - V_a$

$$\text{COEFFICIENTS } t4 = t4 - k1 \times d41$$

$$t1 = t1 + k1 \times d41$$

CONVERTING A DELAY TIME TO A  
POSITIVE VALUE

$$t_m = \min(t1, t2, t3, t4)$$

$$T1 = t1 - t_m \quad T3 = t3 - t_m$$

$$T2 = t2 - t_m \quad T4 = t4 - t_m$$



FIG.28

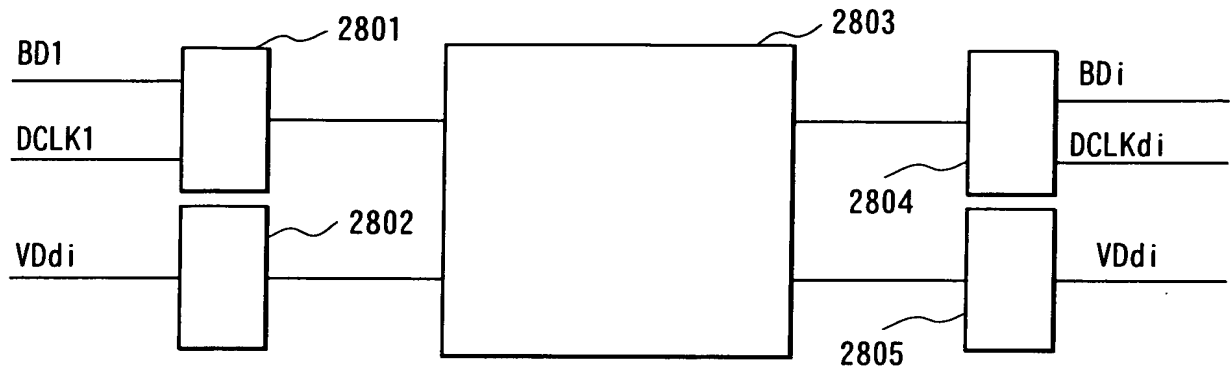


FIG.29

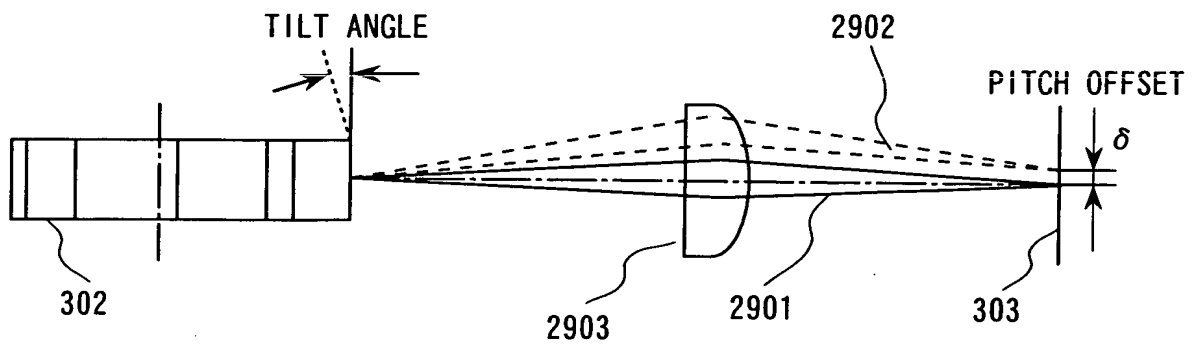


FIG.30

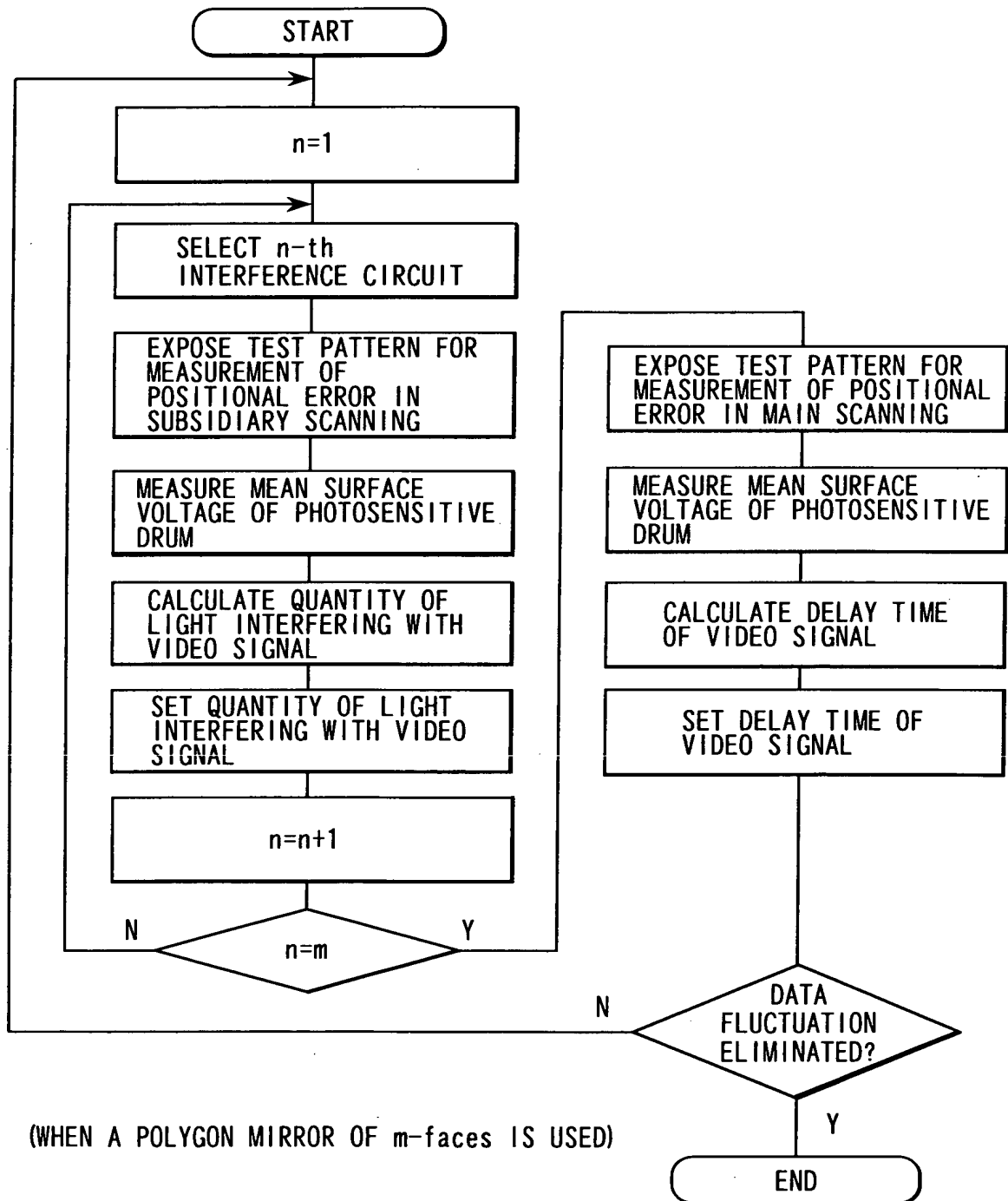
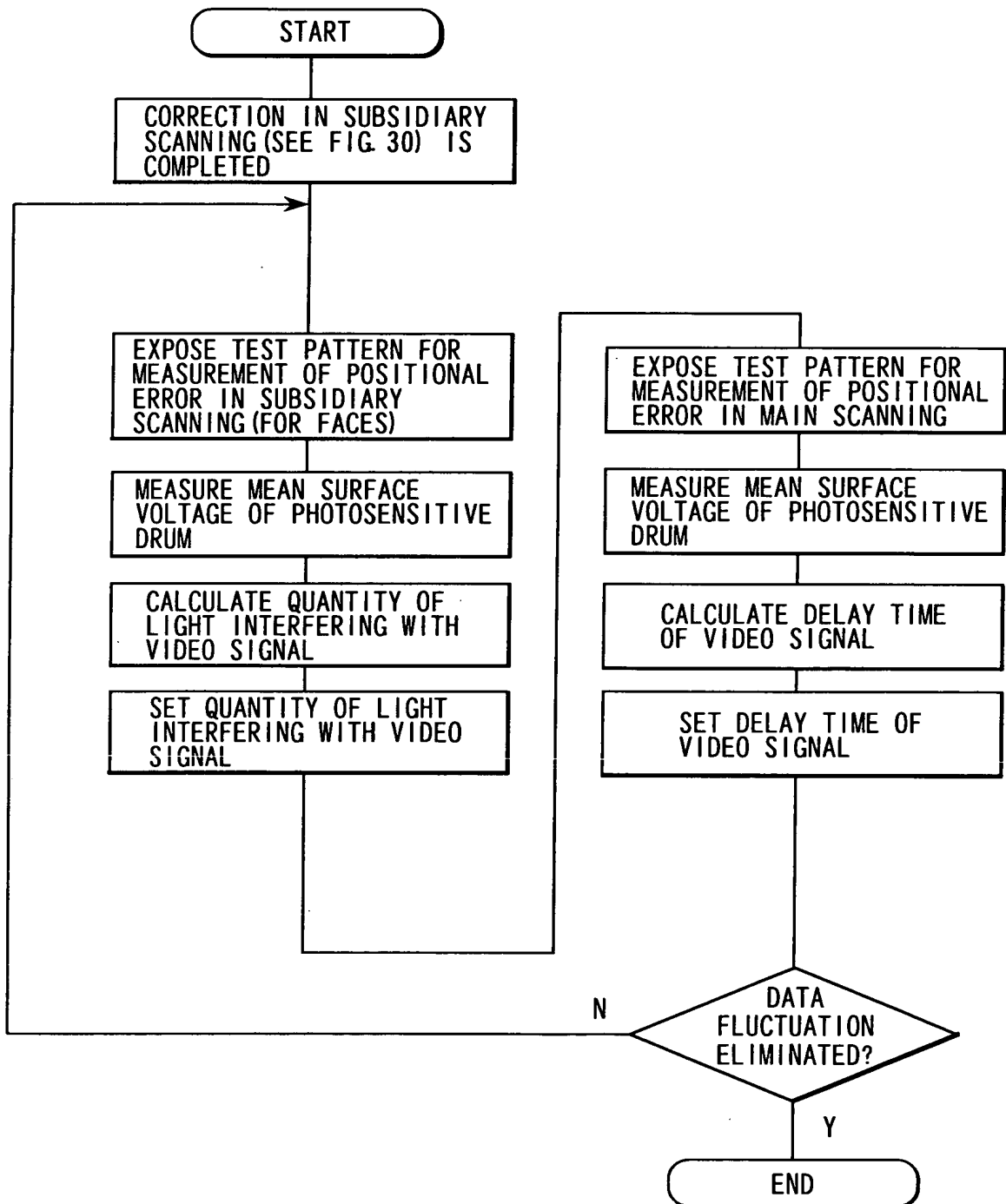


FIG.31



**FIG.32**

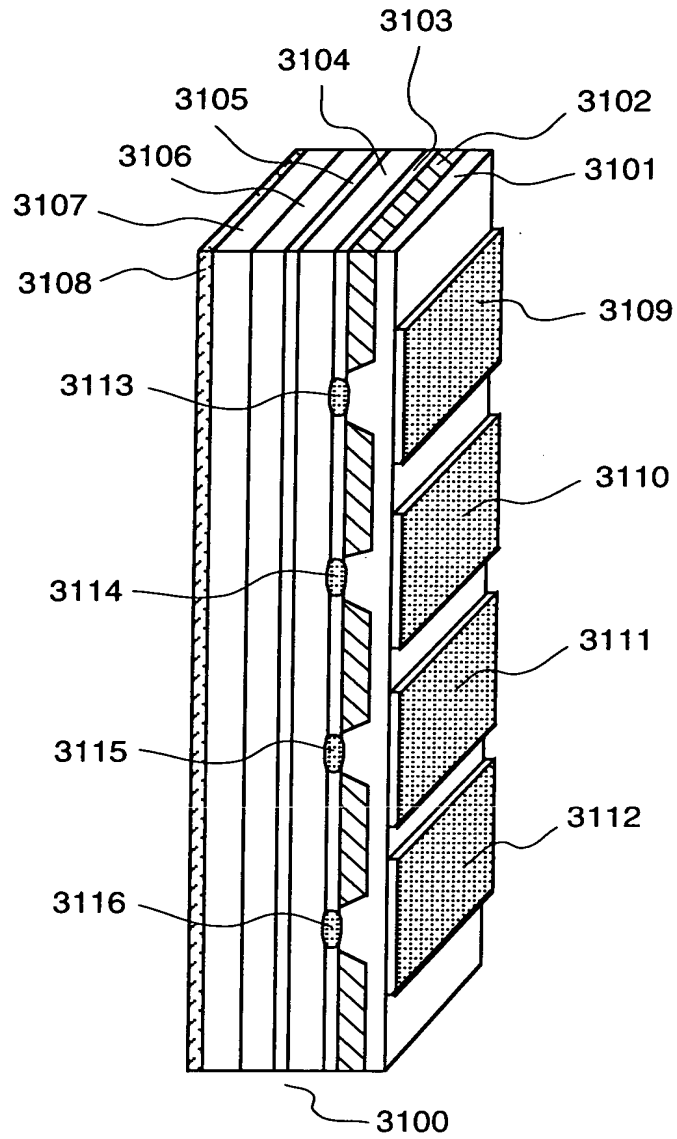
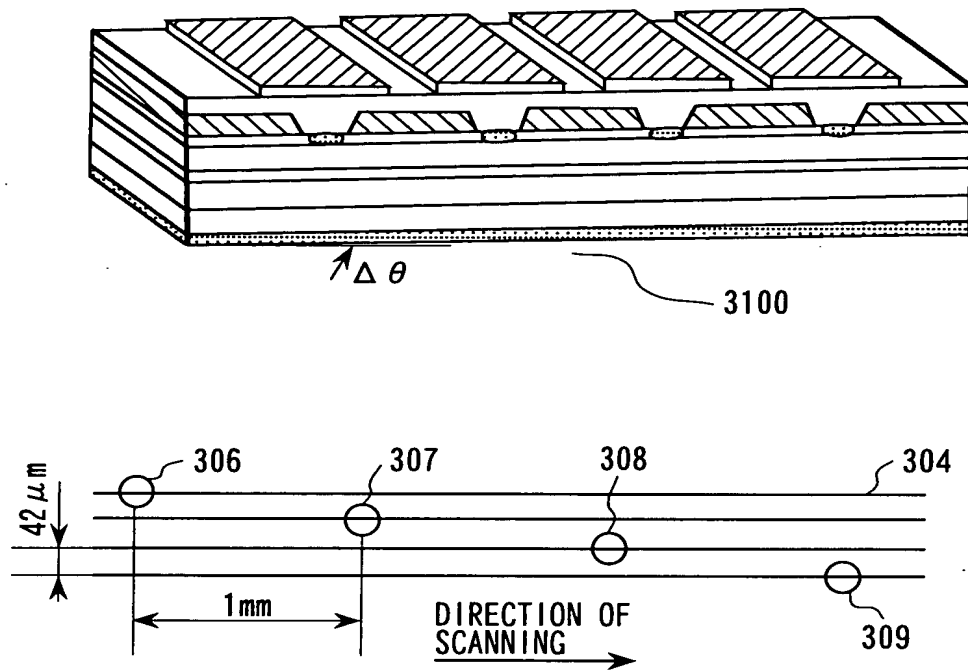


FIG.33



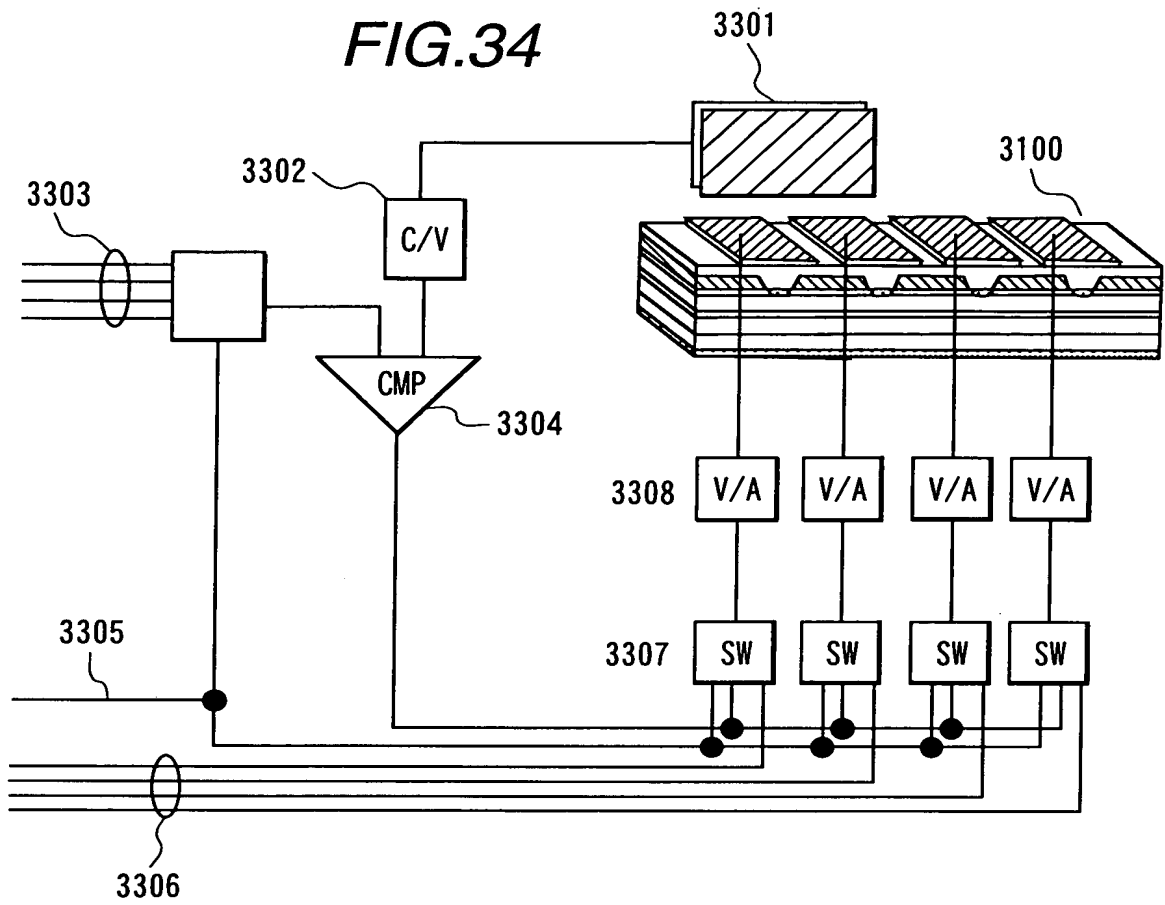
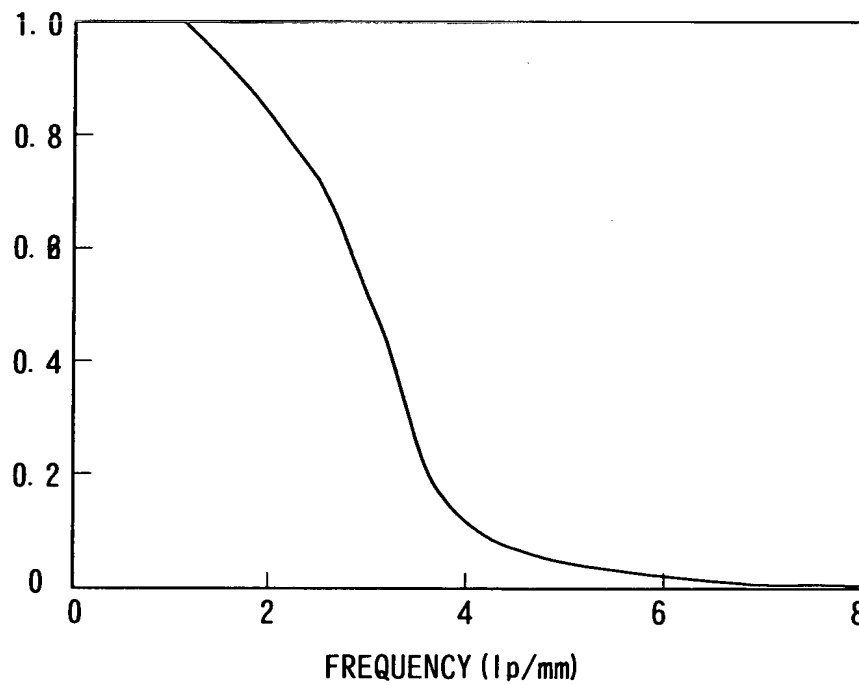
**FIG.34****FIG.36**

FIG.35

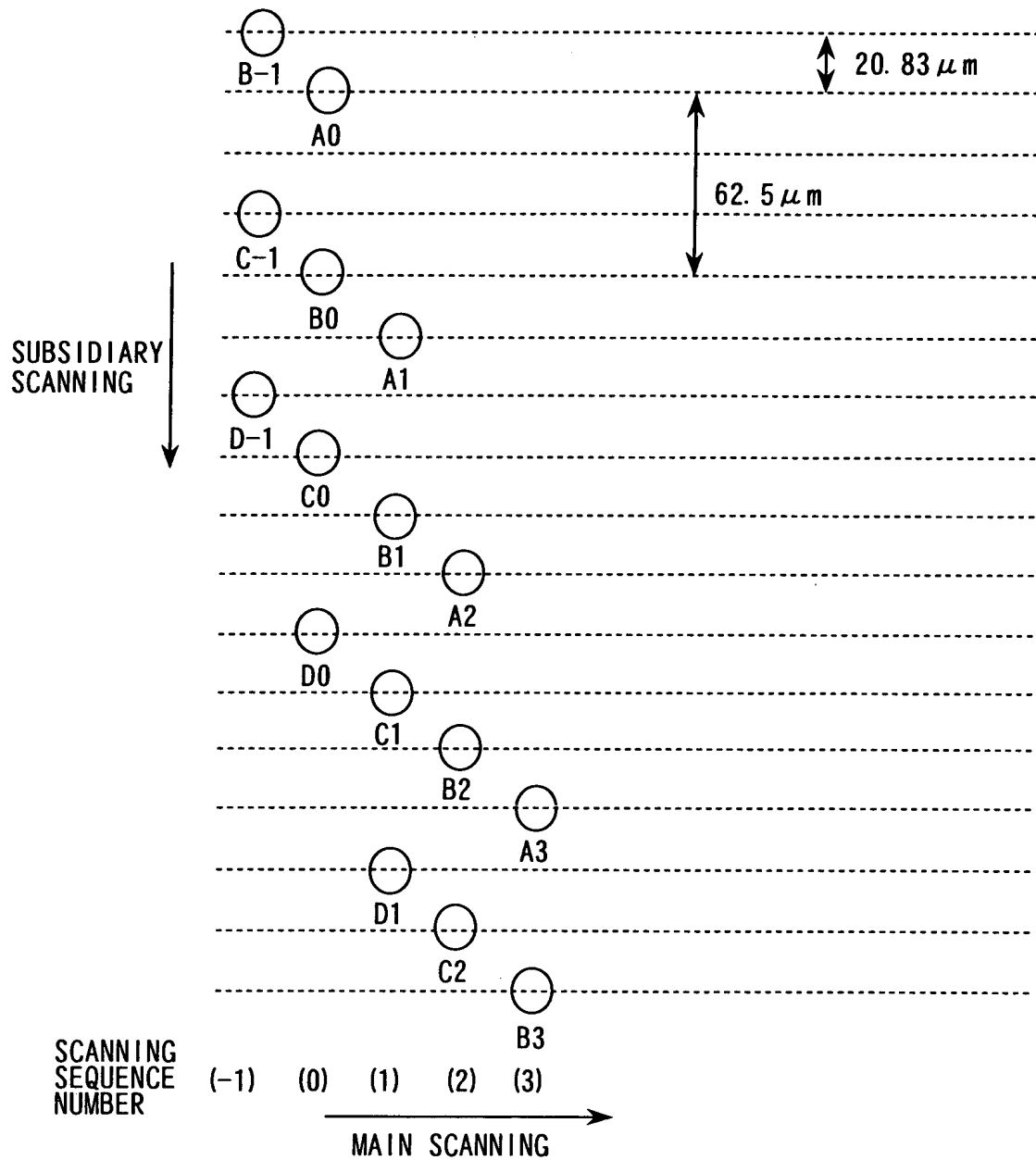


FIG.37

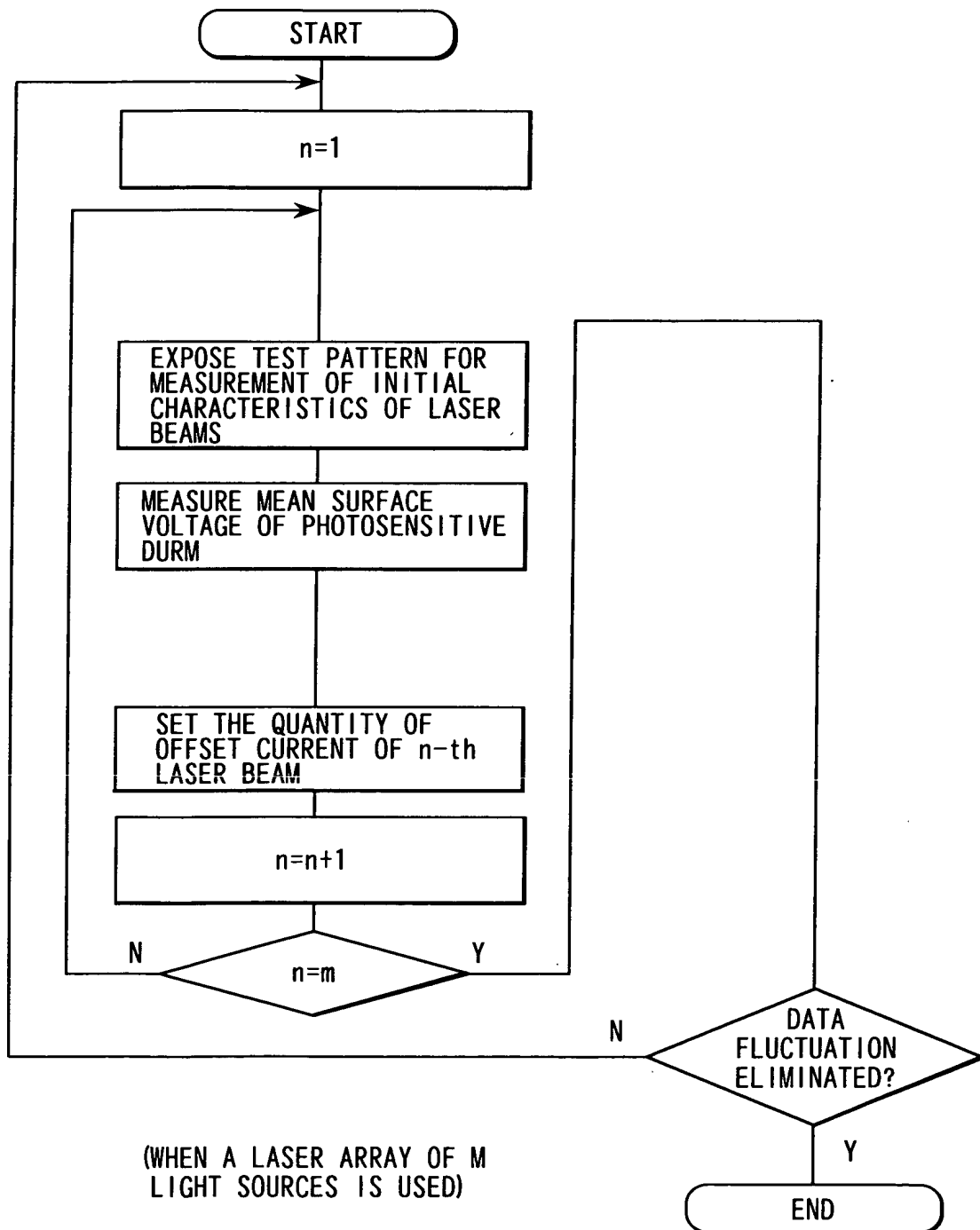




FIG.38

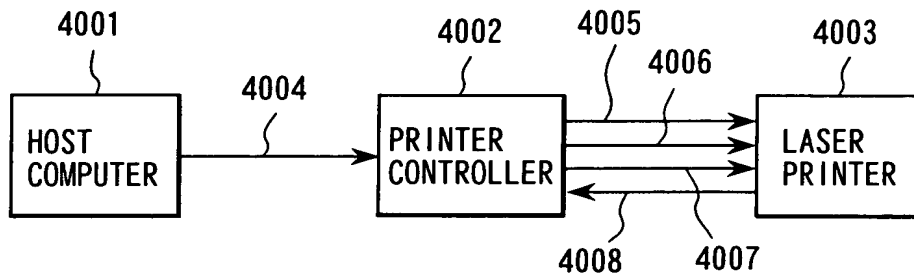
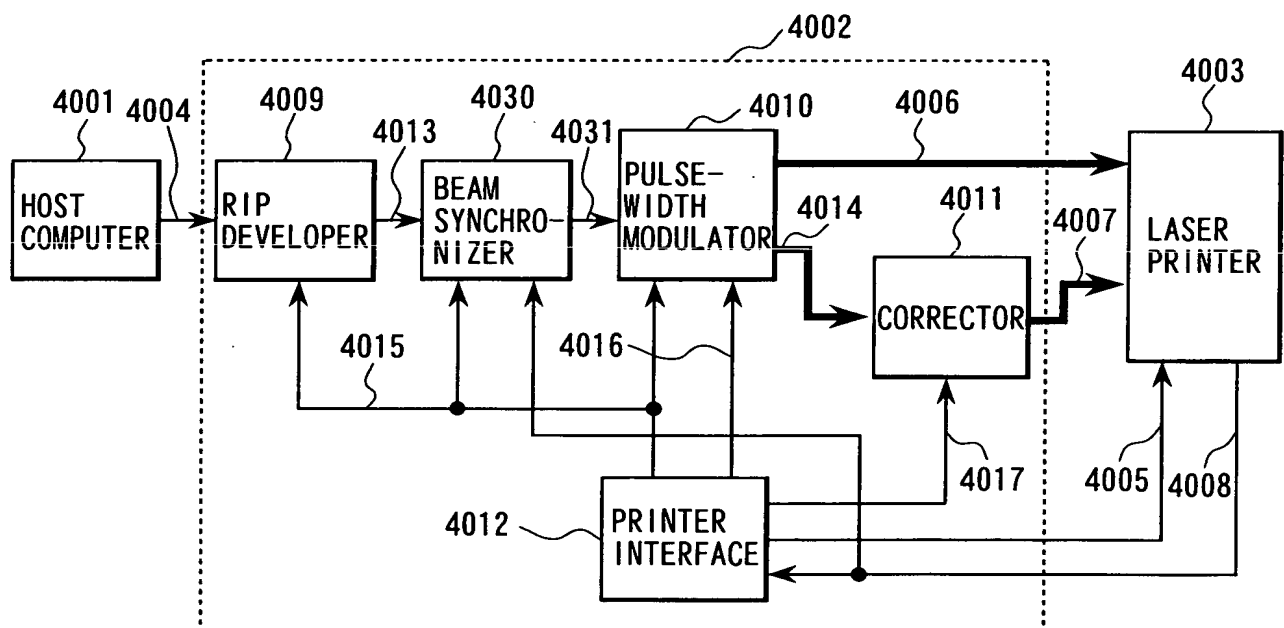
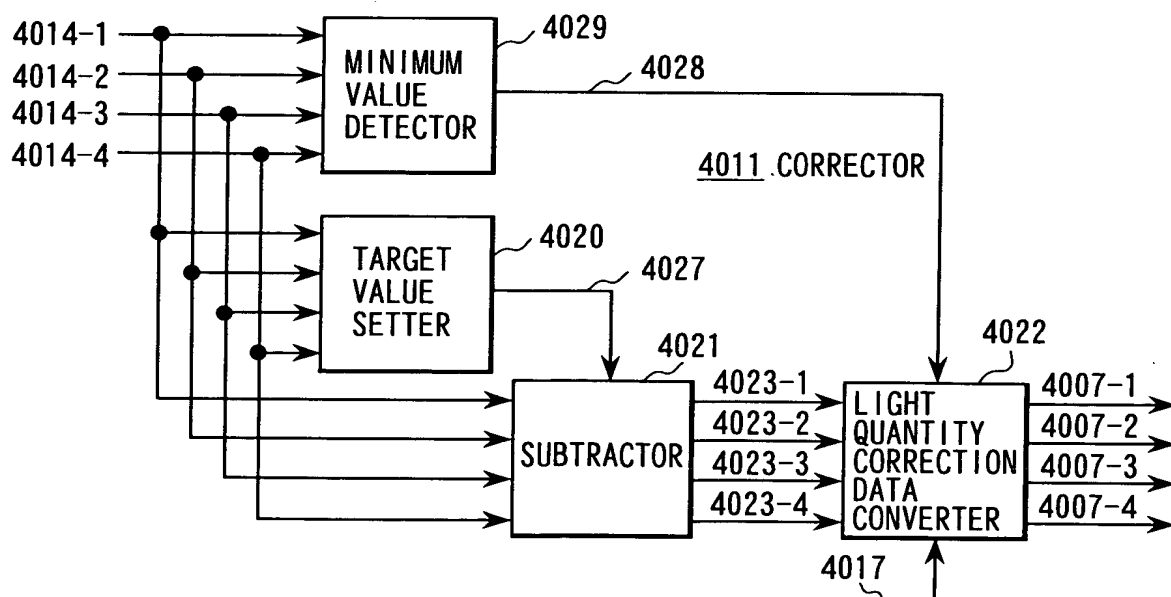
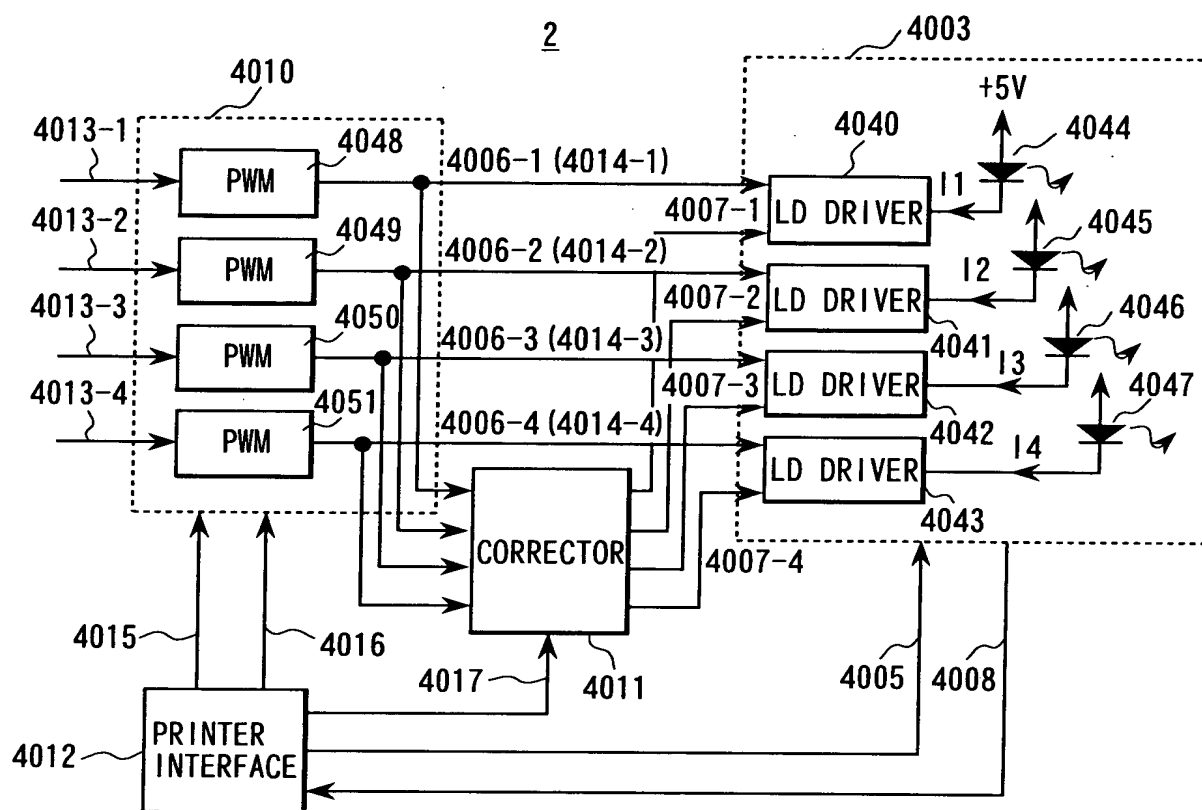


FIG.39



2



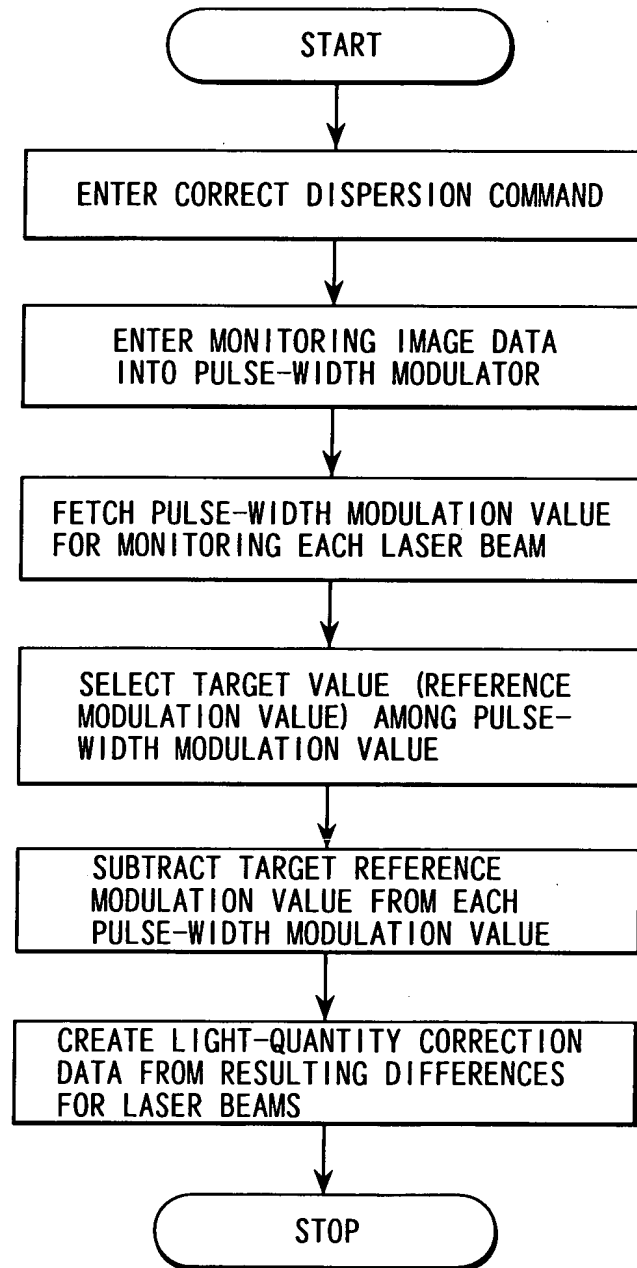
*FIG.42*

FIG.43

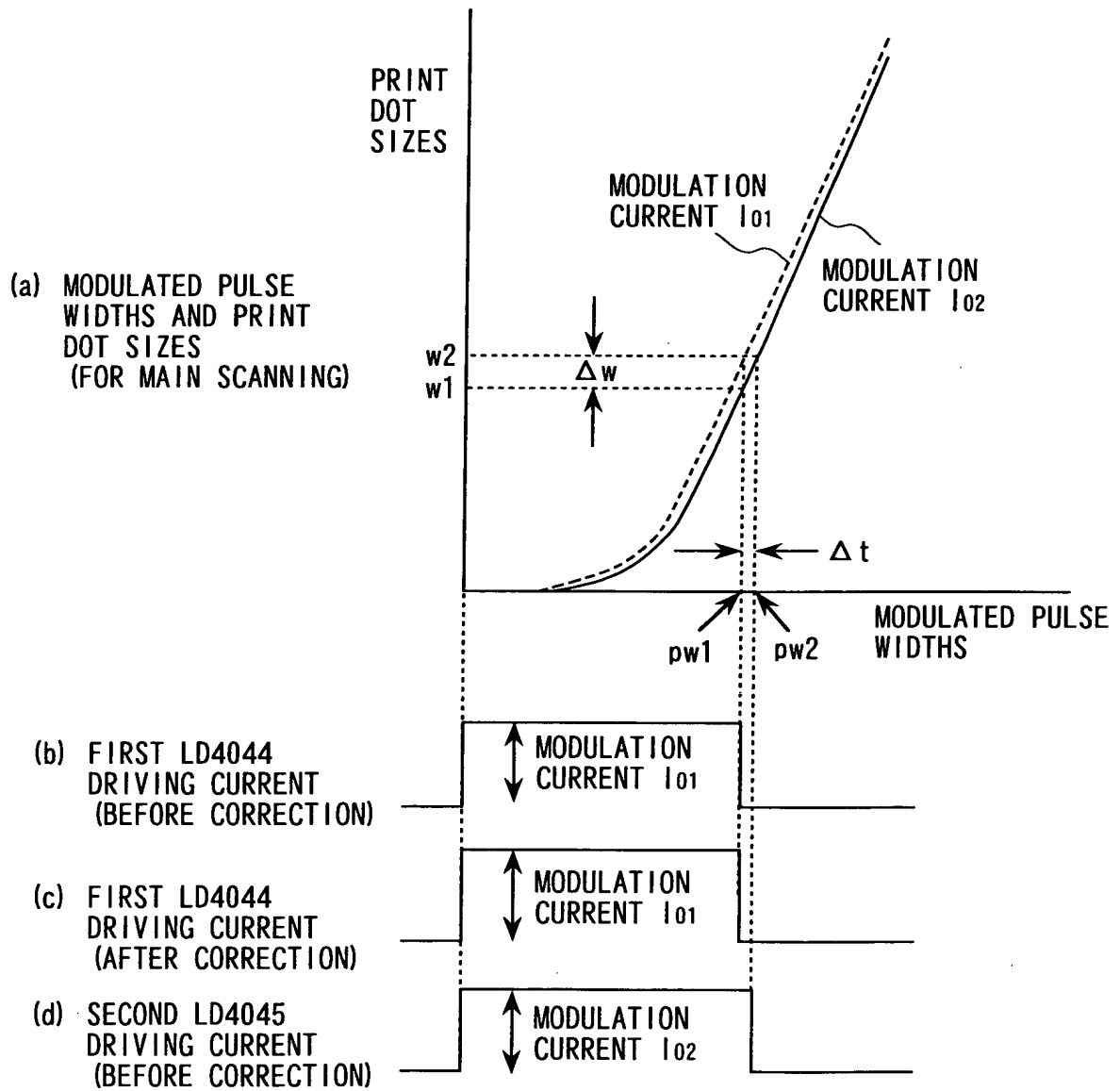


FIG.44

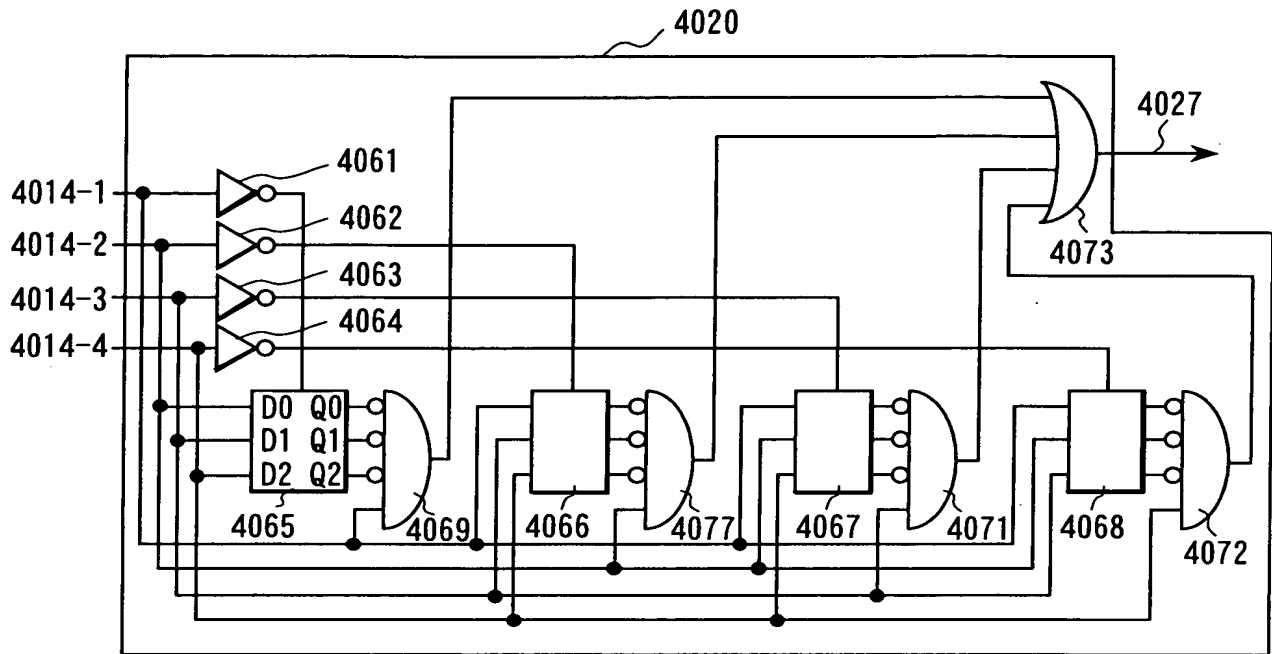


FIG.46

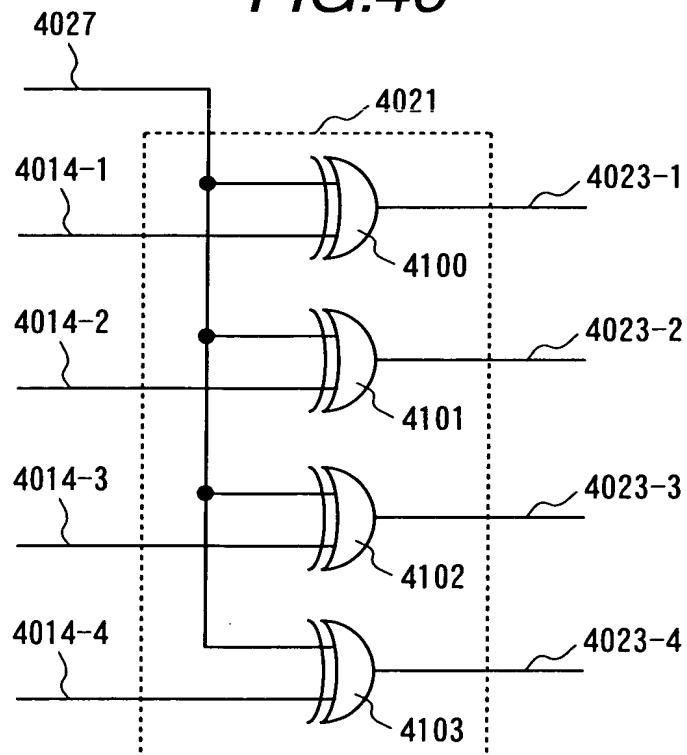


FIG.45

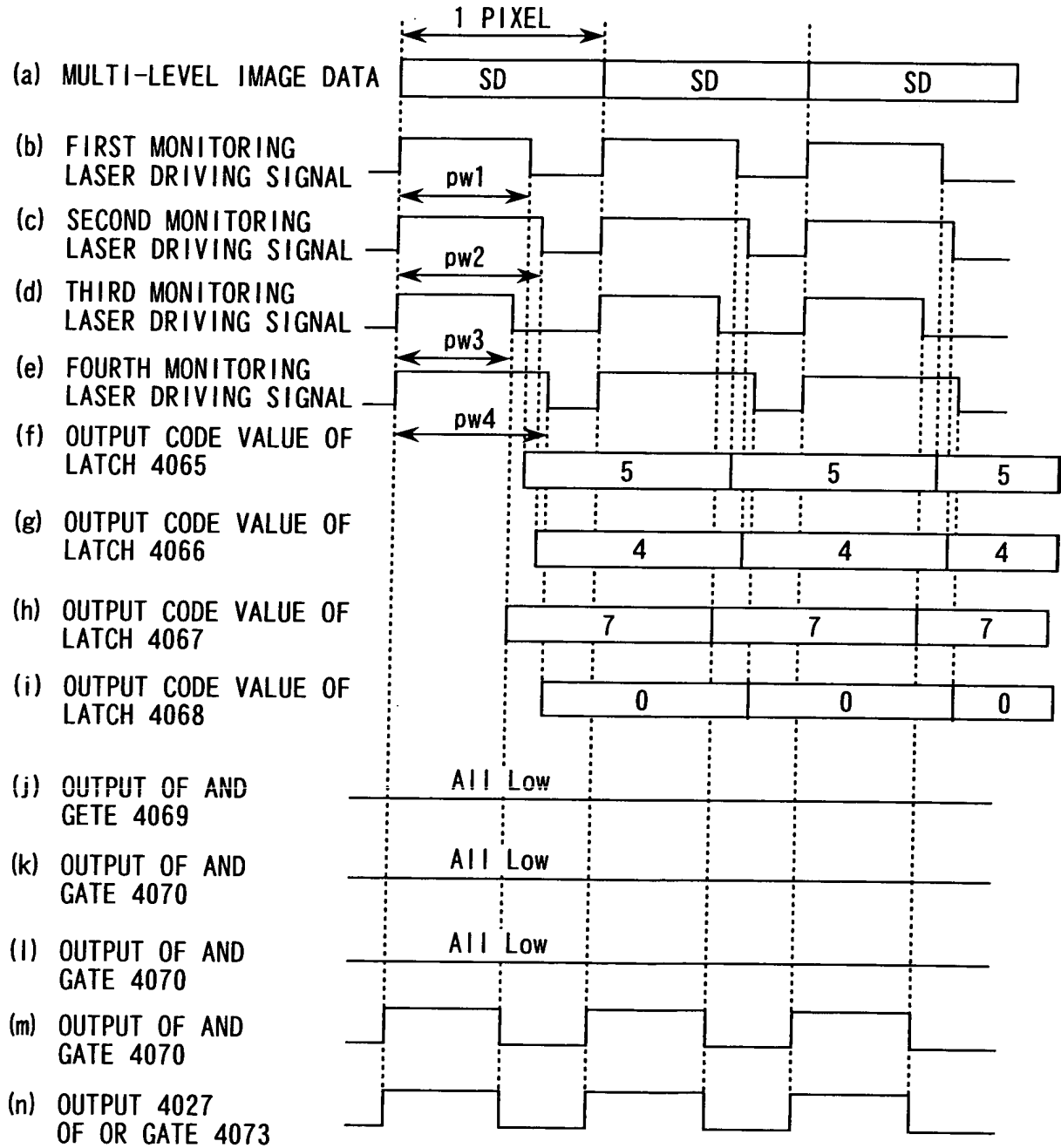


FIG.47

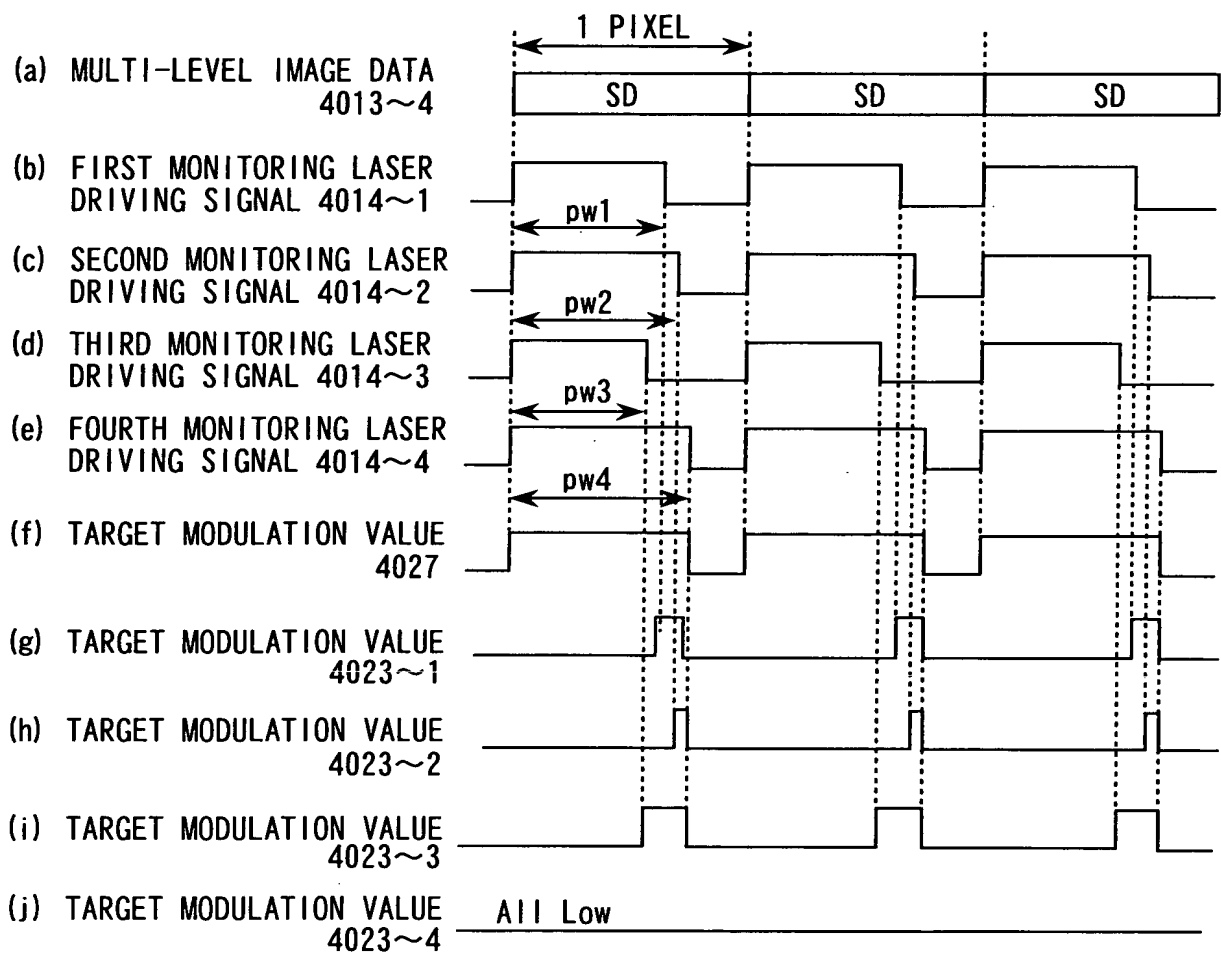


FIG.48

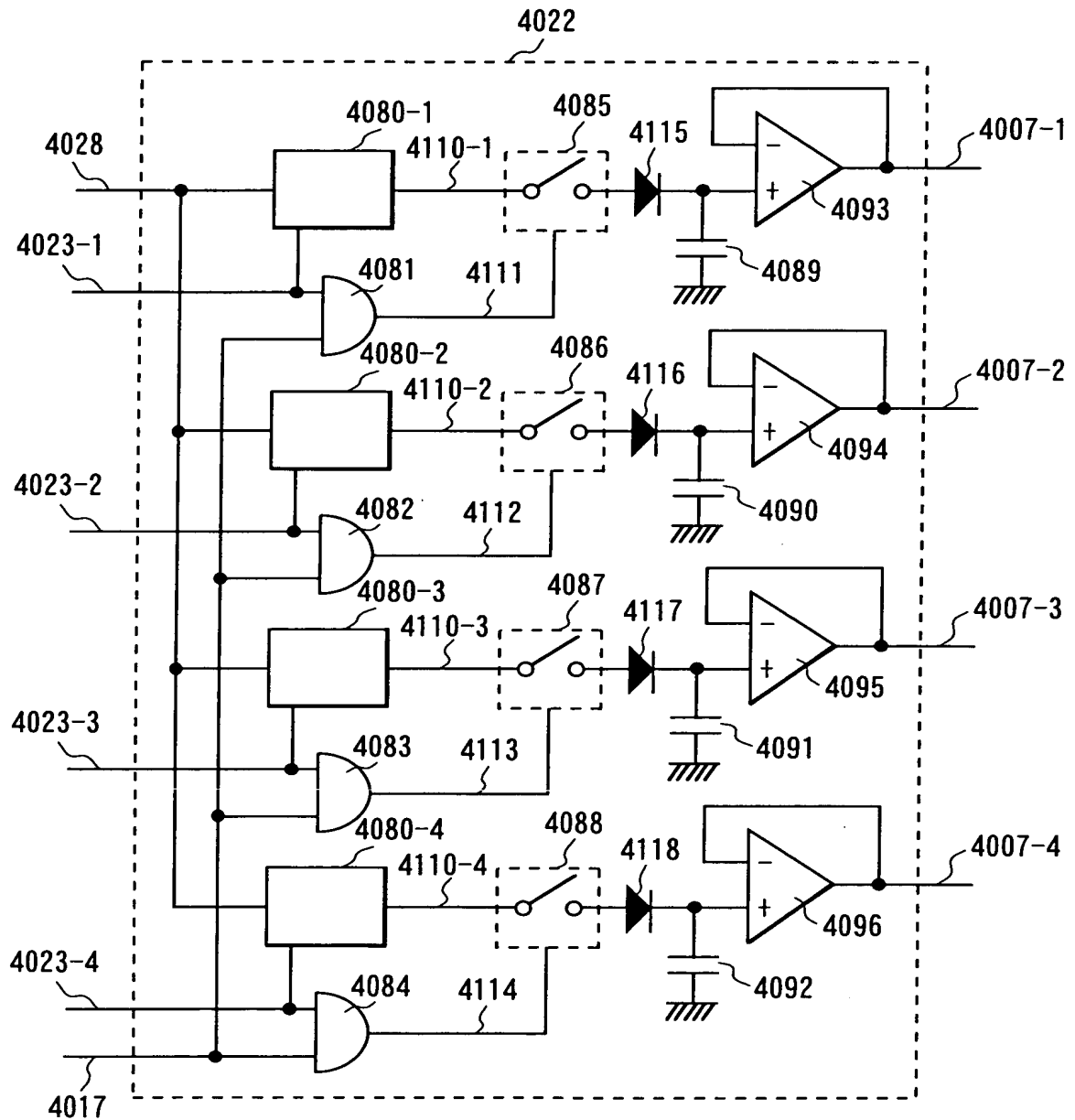




FIG.49

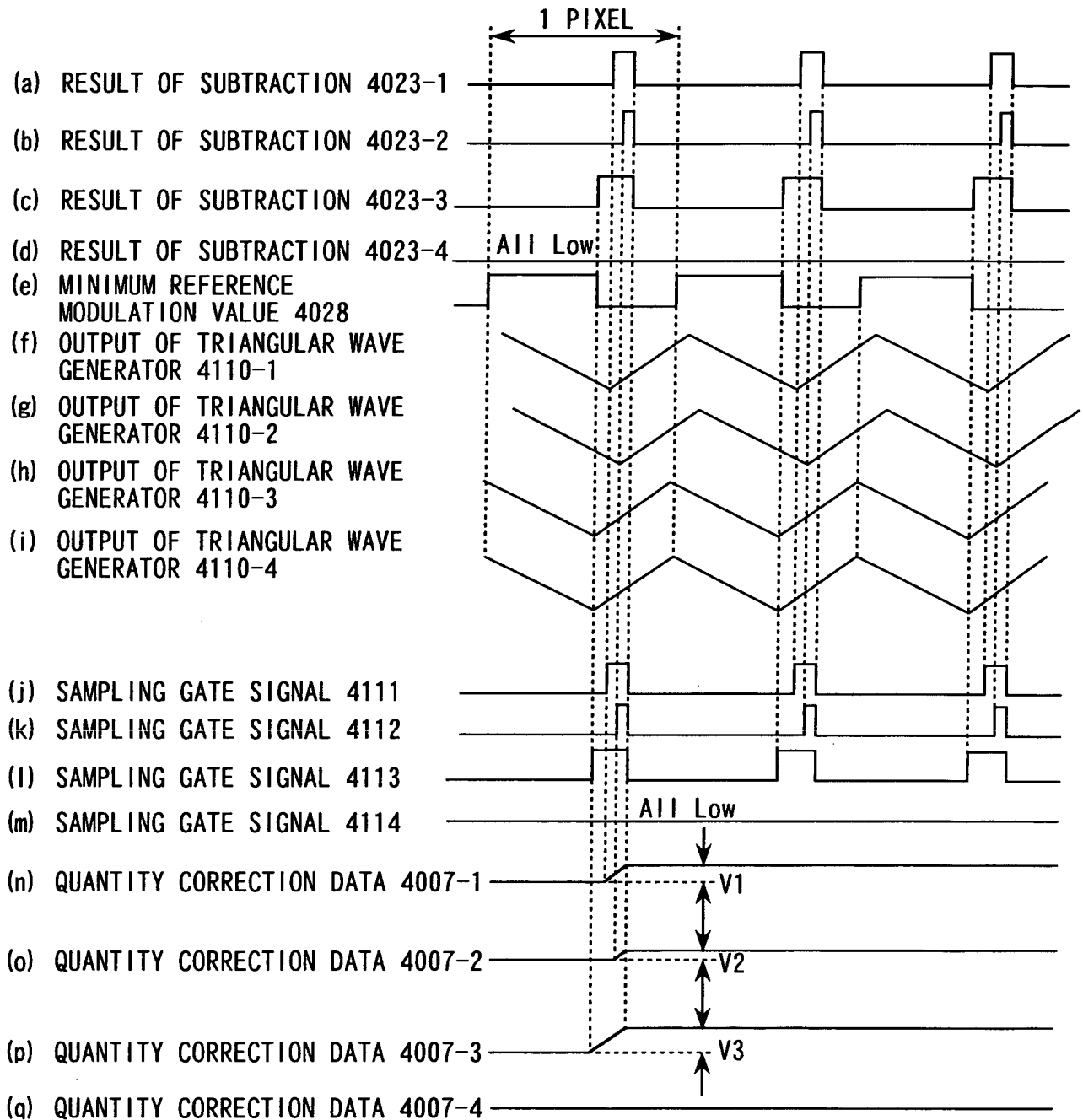


FIG.50

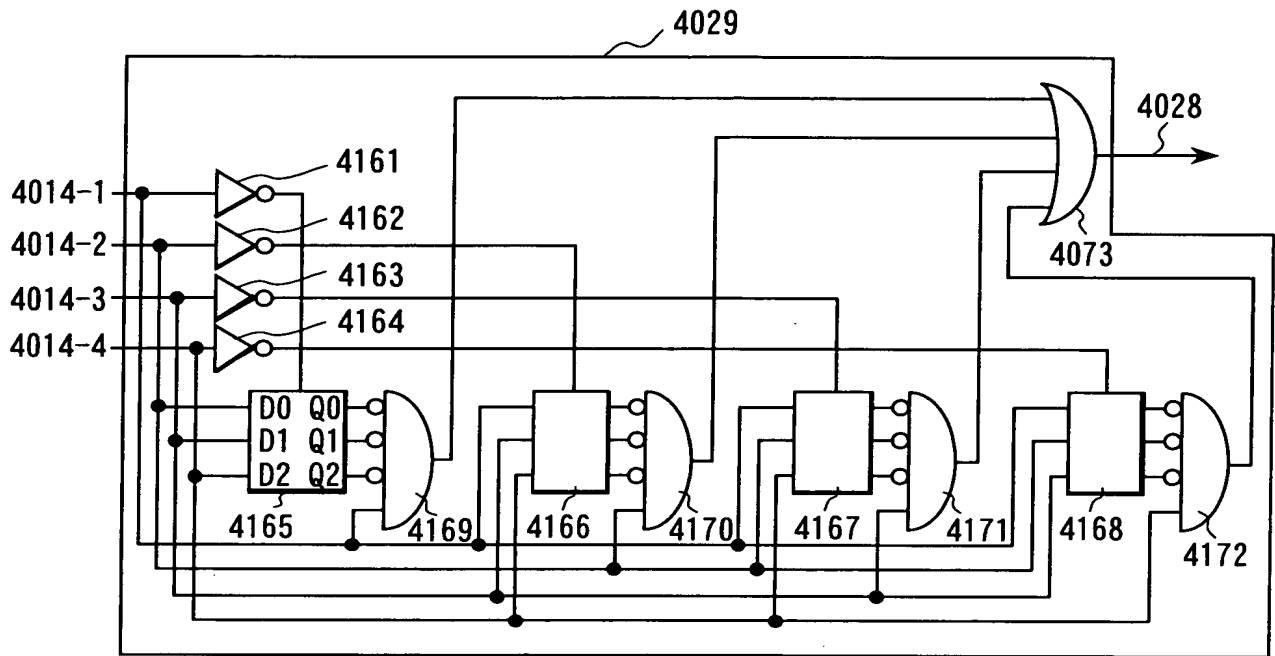


FIG.51

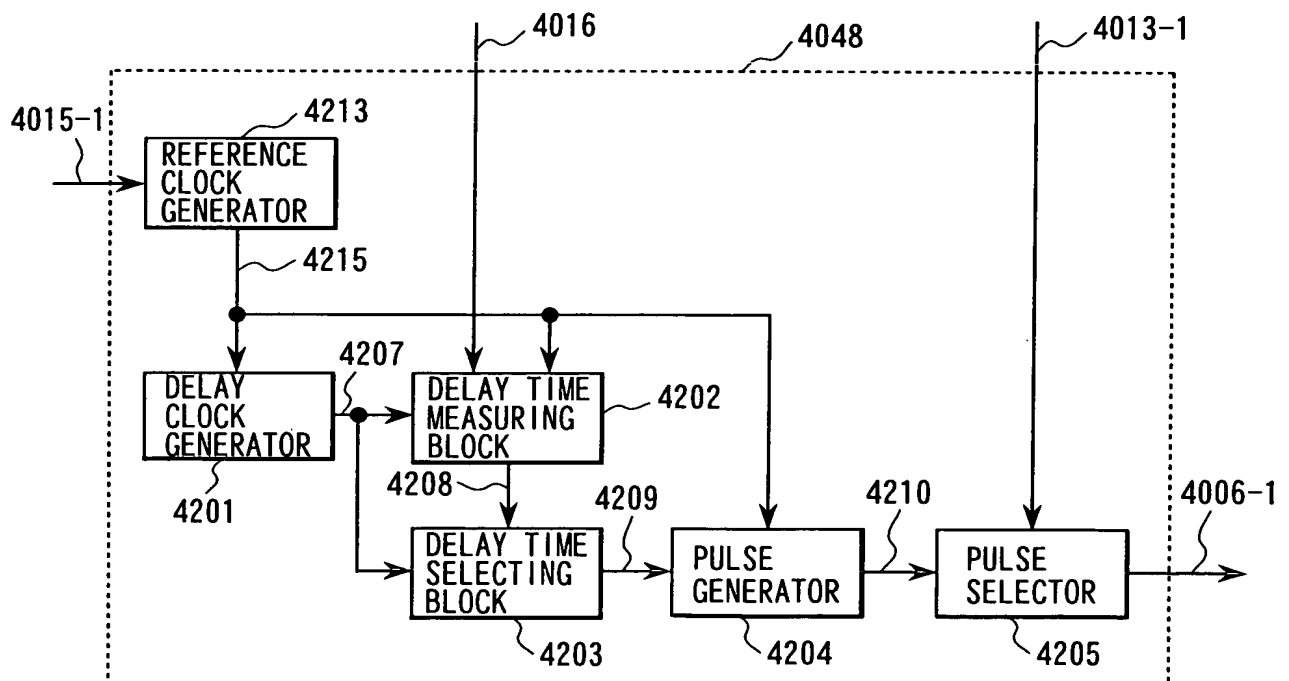
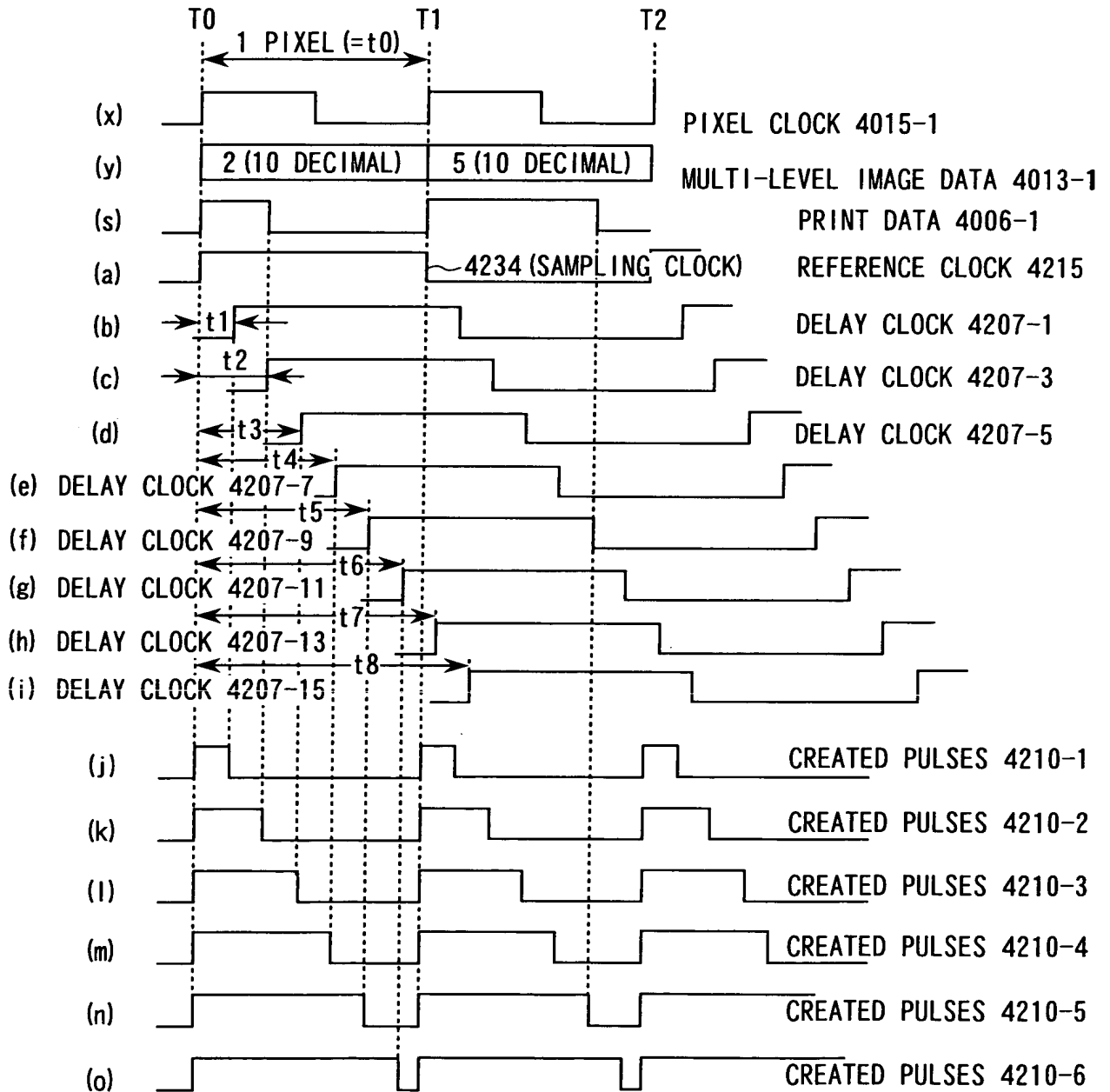


FIG.52



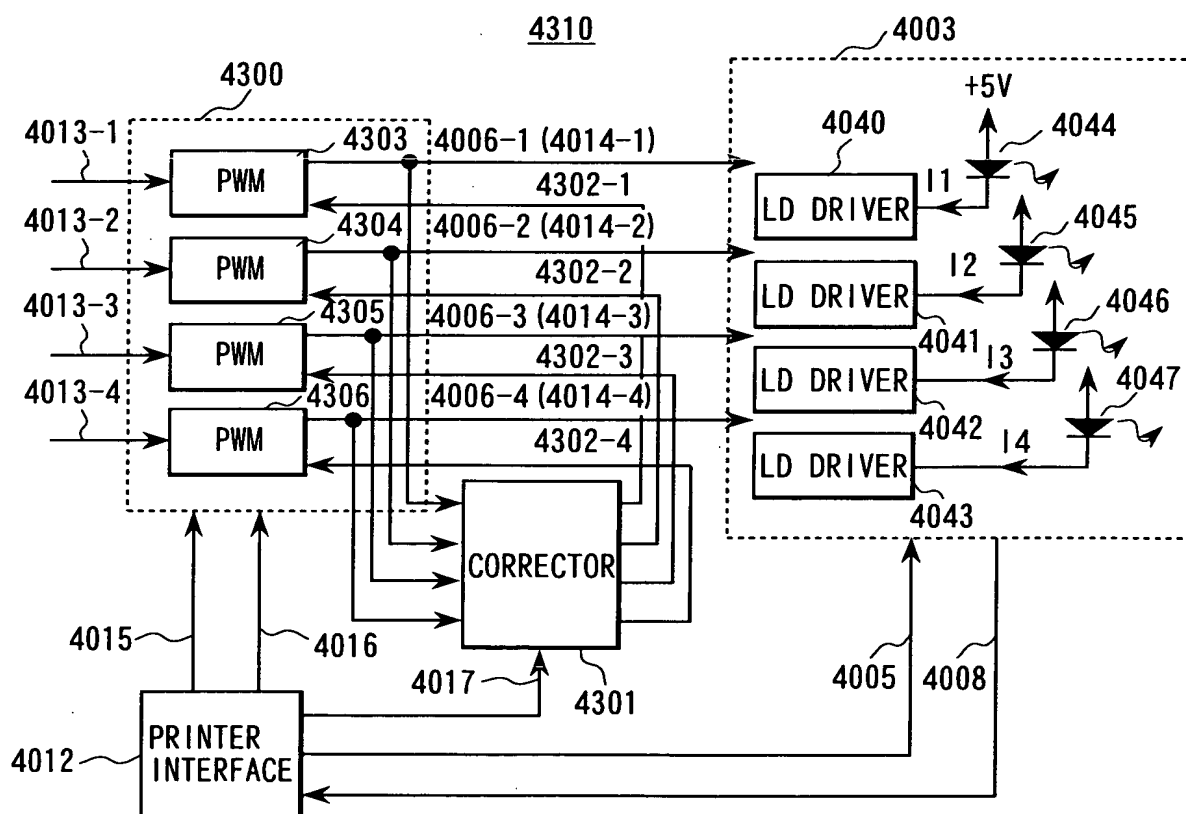


FIG.55

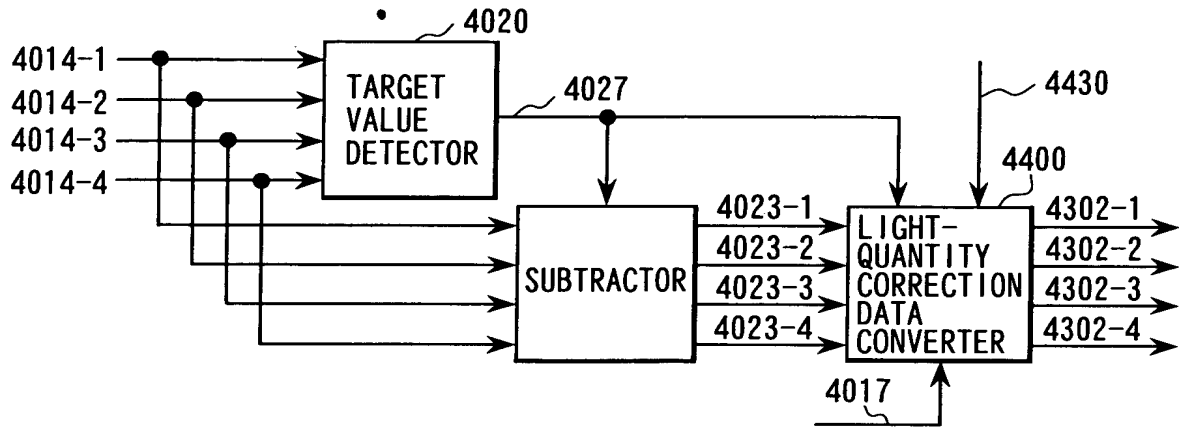


FIG.58

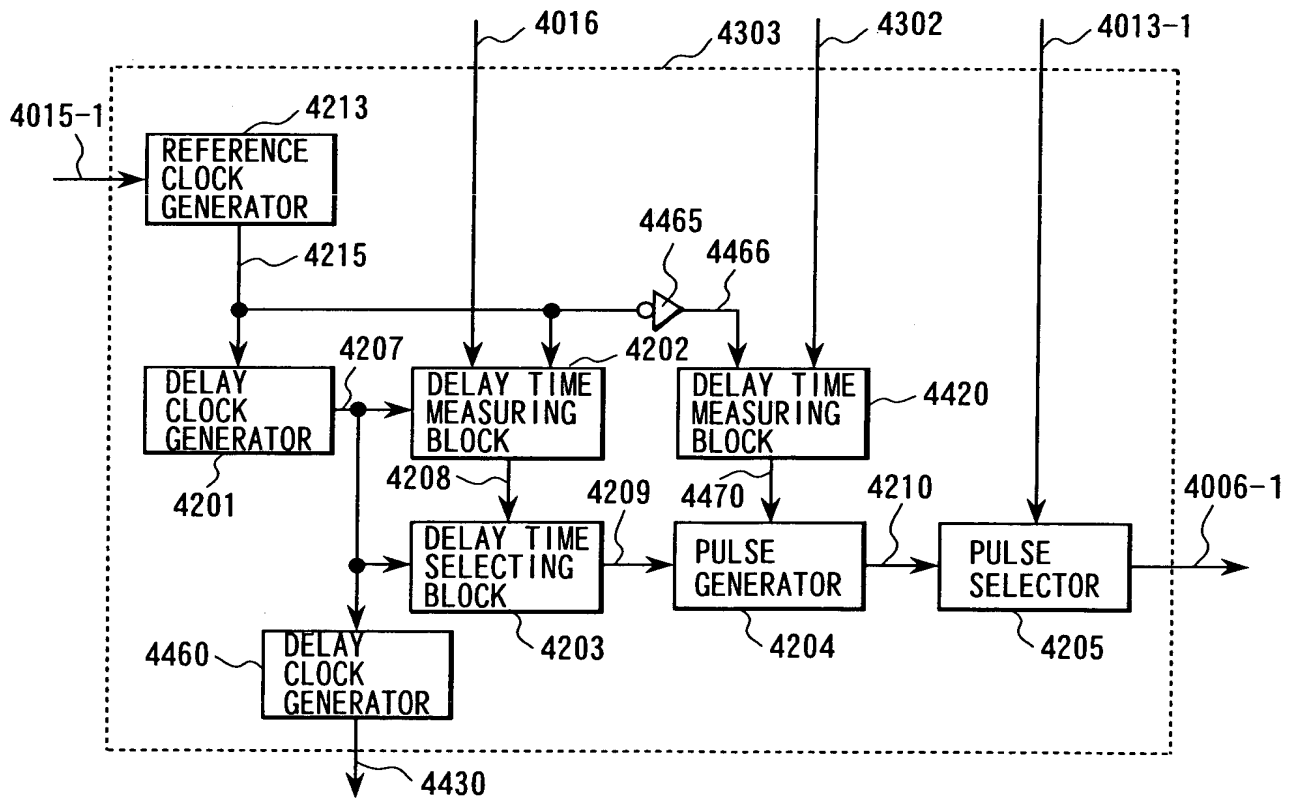


FIG.56

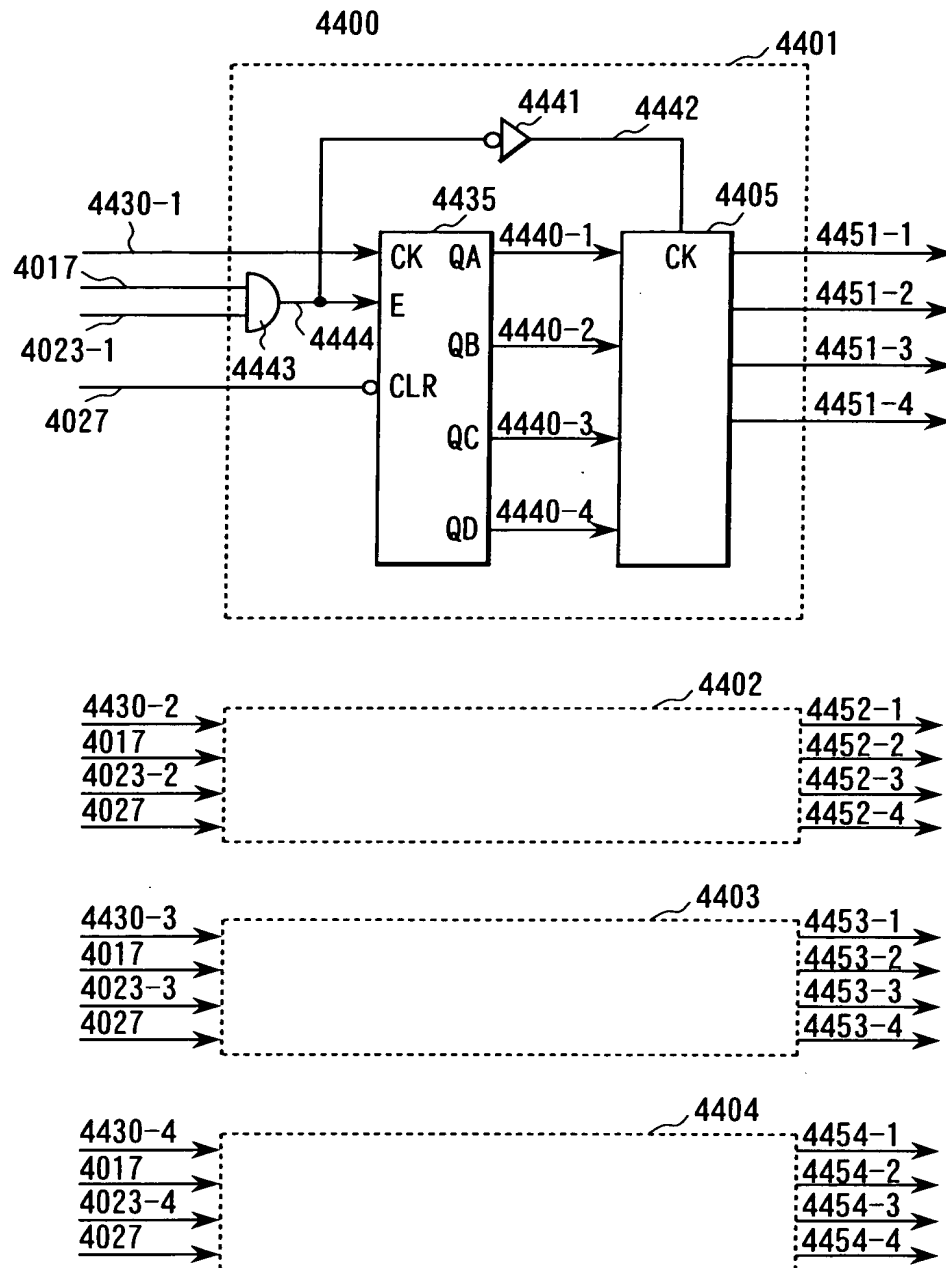


FIG.57

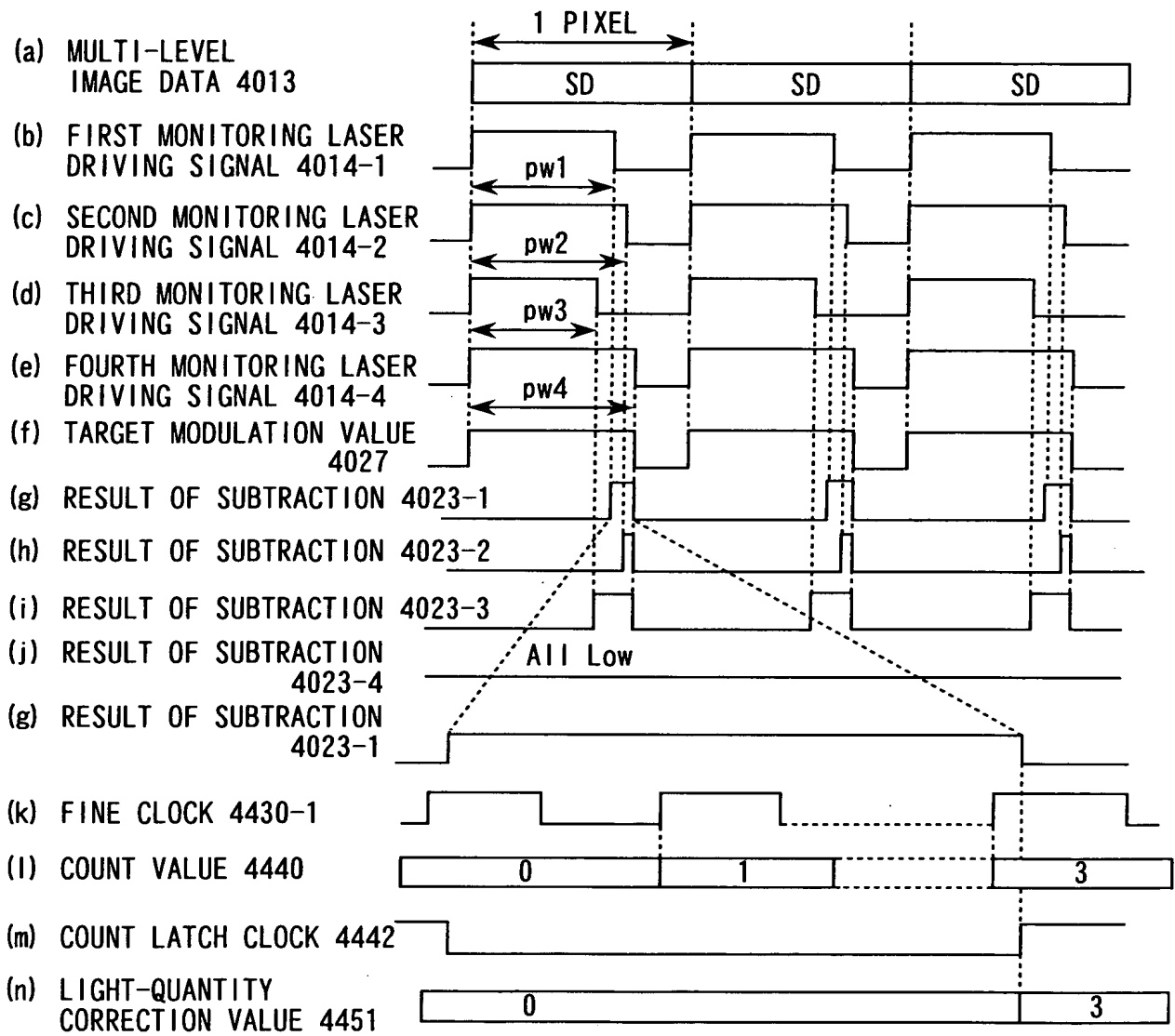


FIG.59

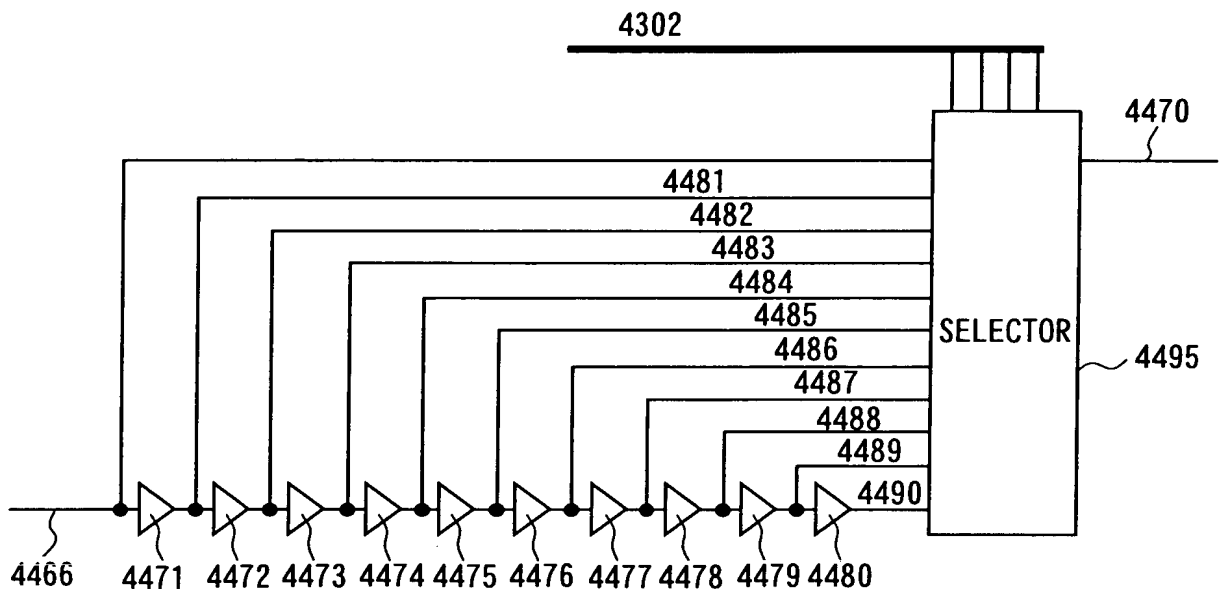




FIG.60

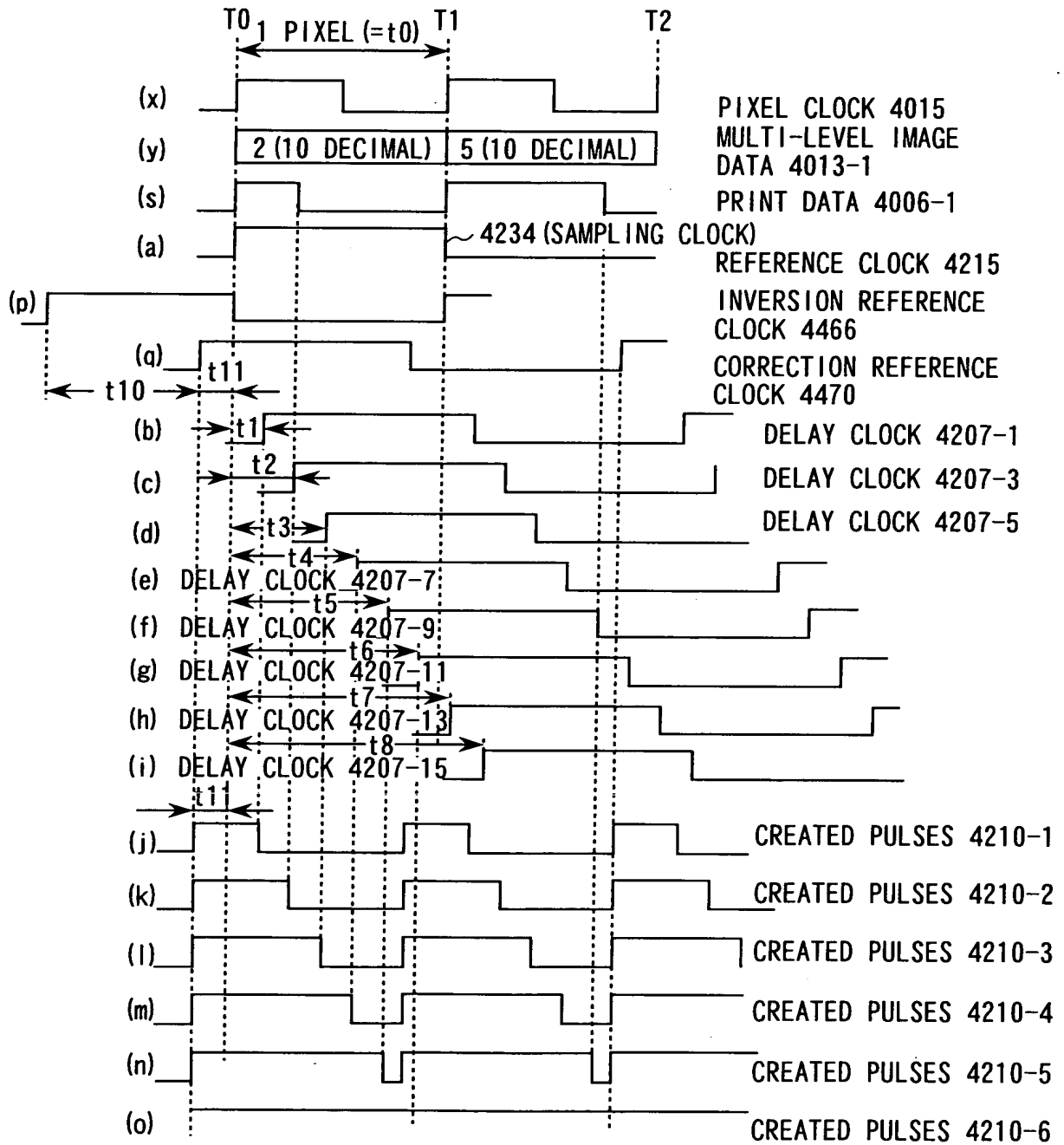


FIG.61

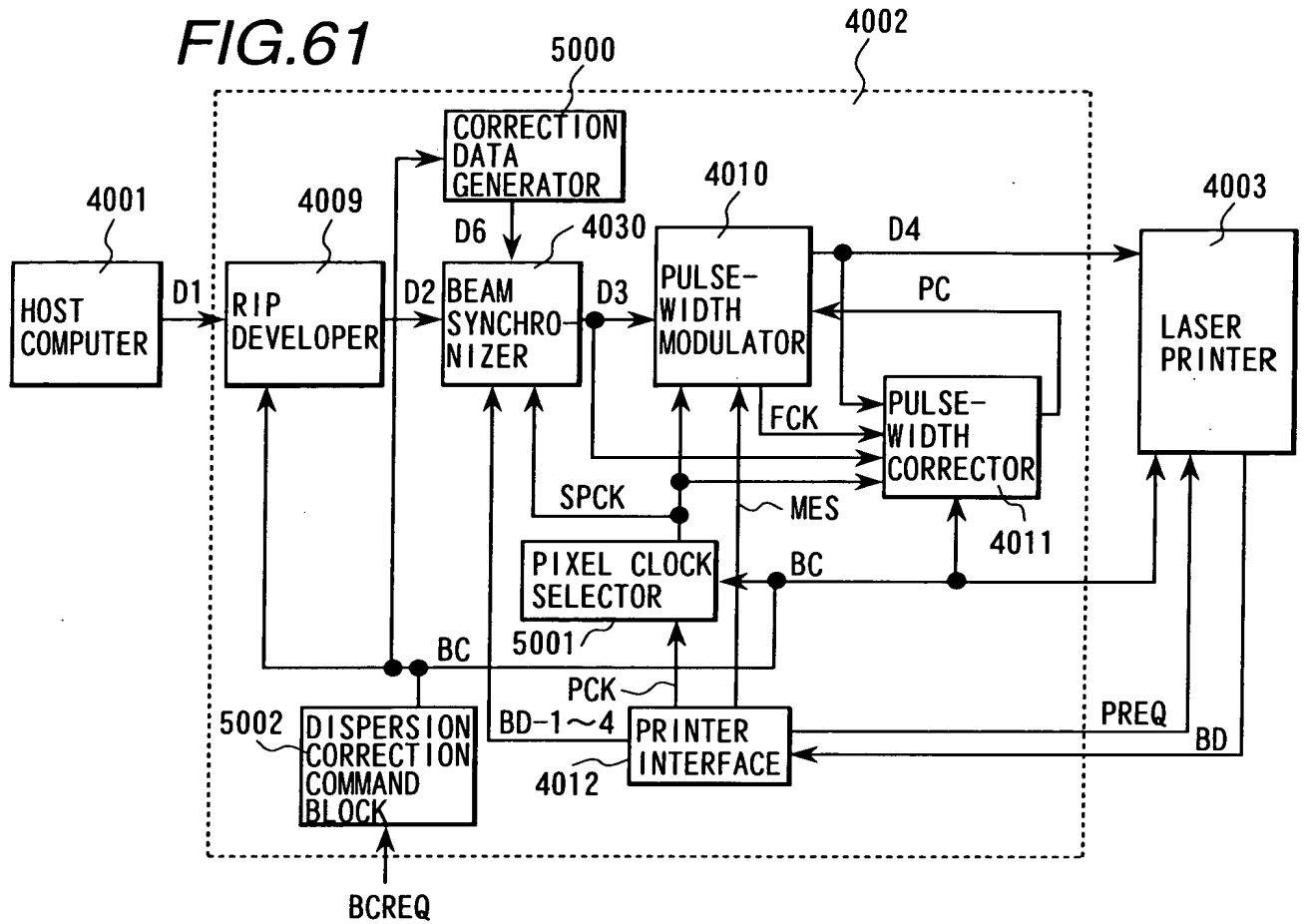


FIG.63

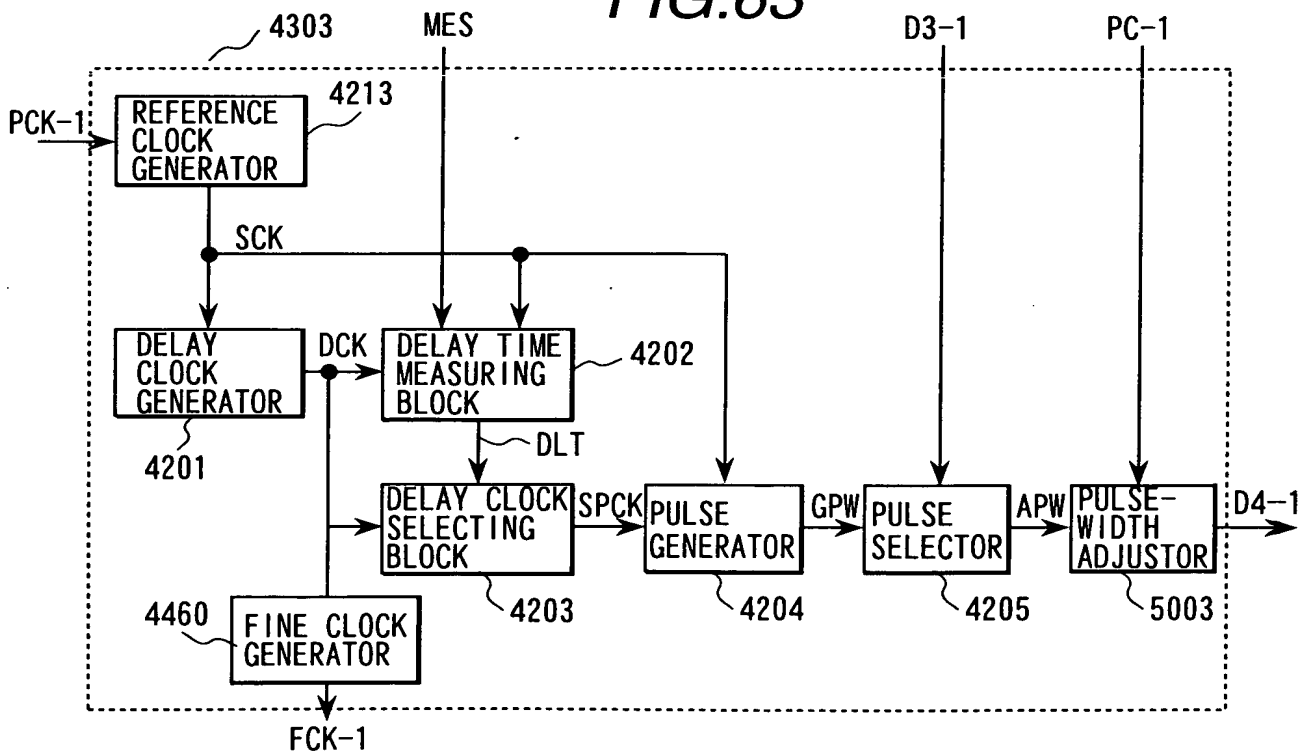


FIG.62

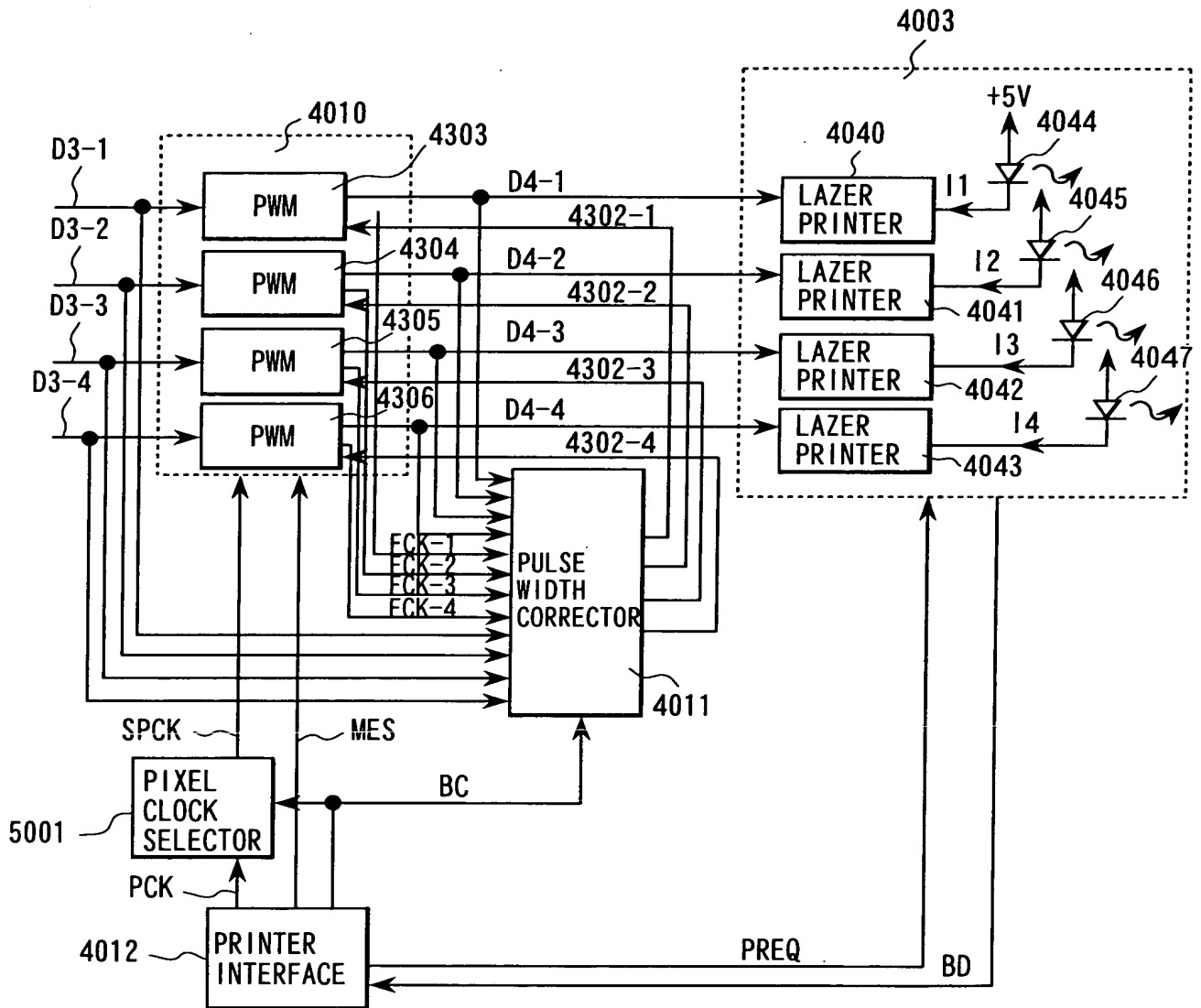


FIG.64

4420

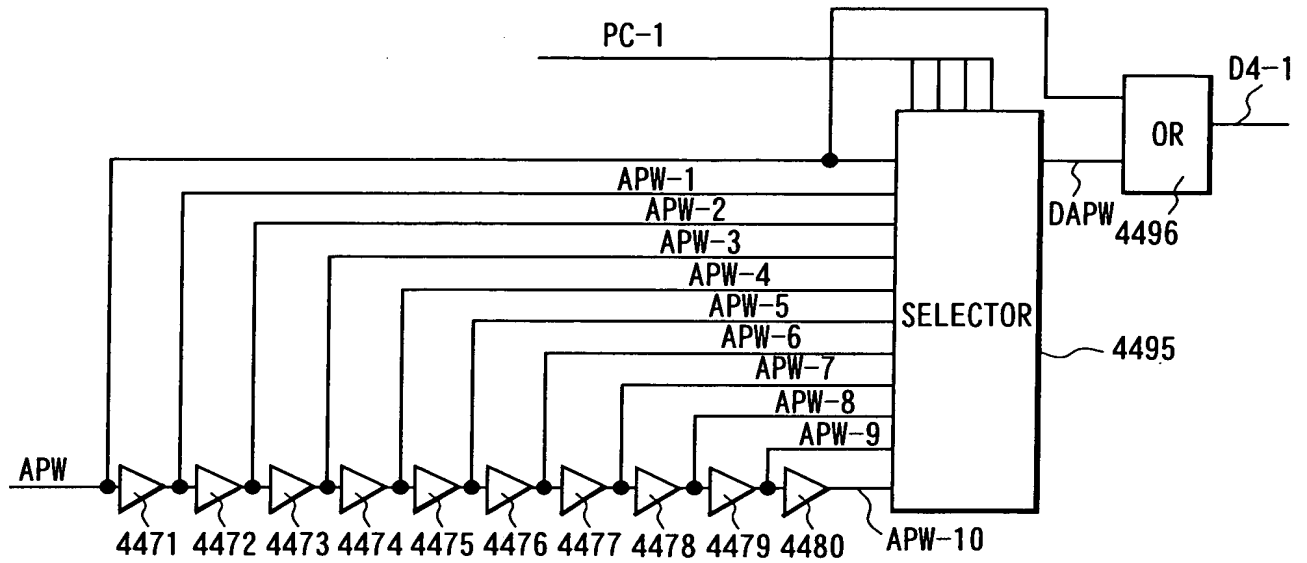


FIG.65

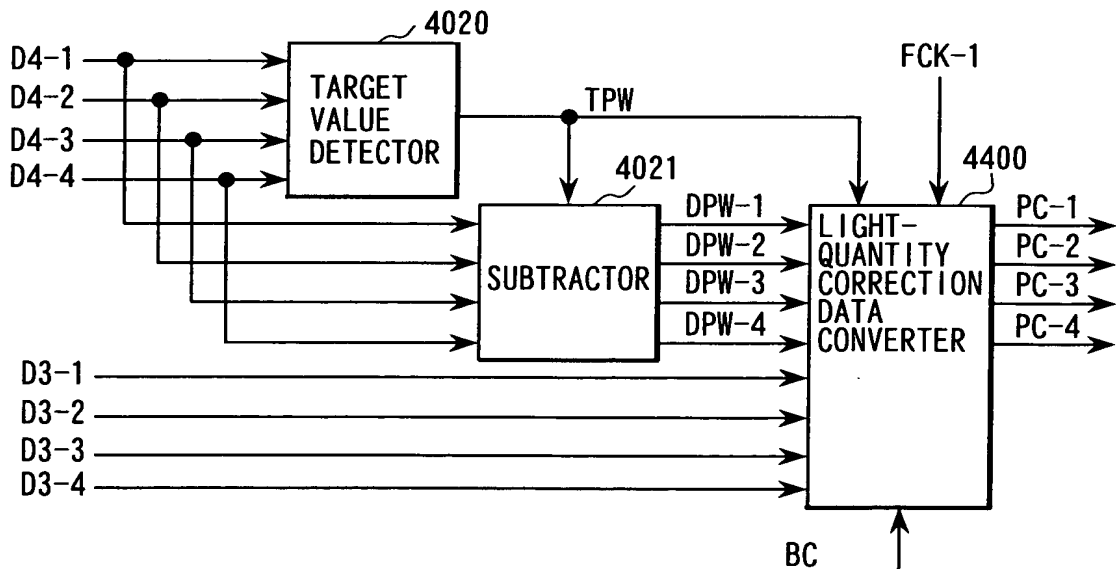


FIG.66

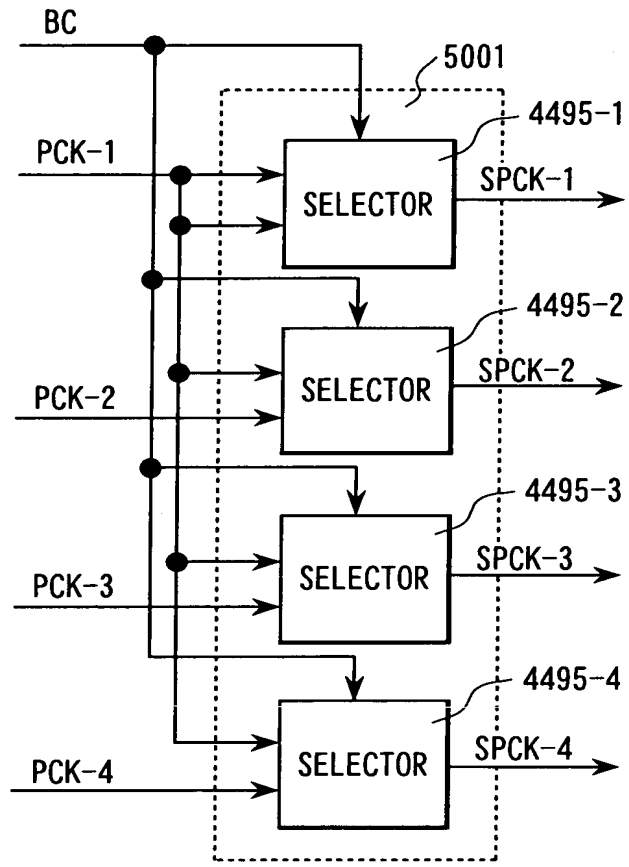


FIG.67

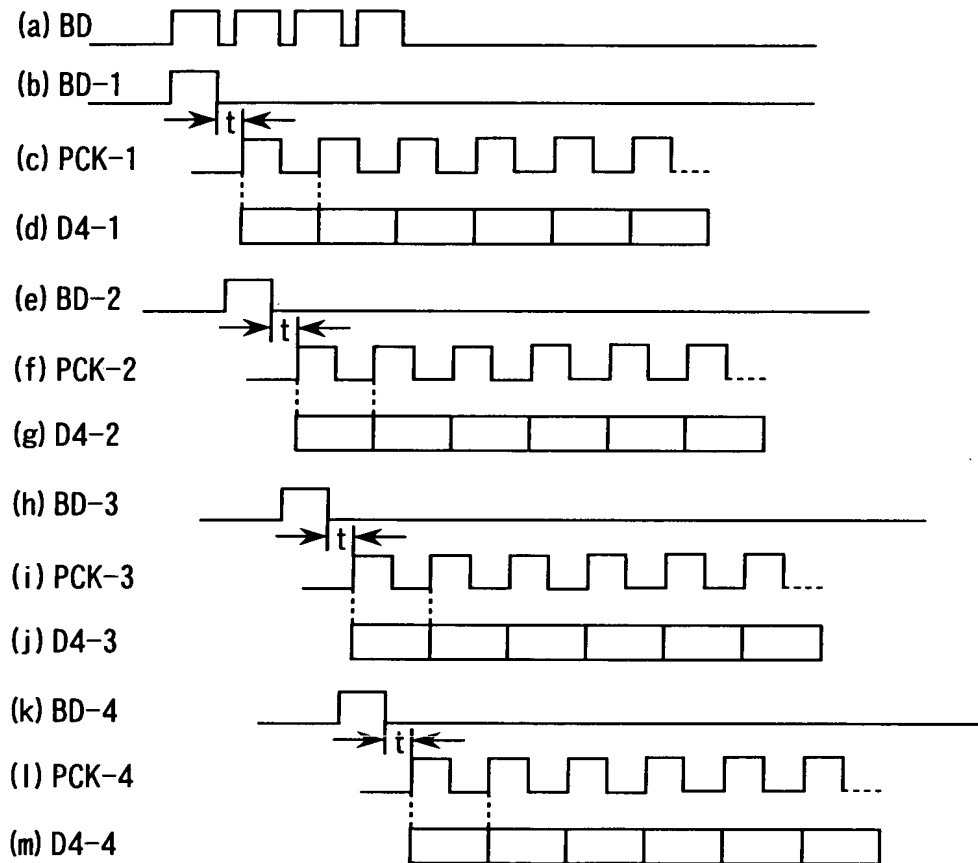


FIG.68

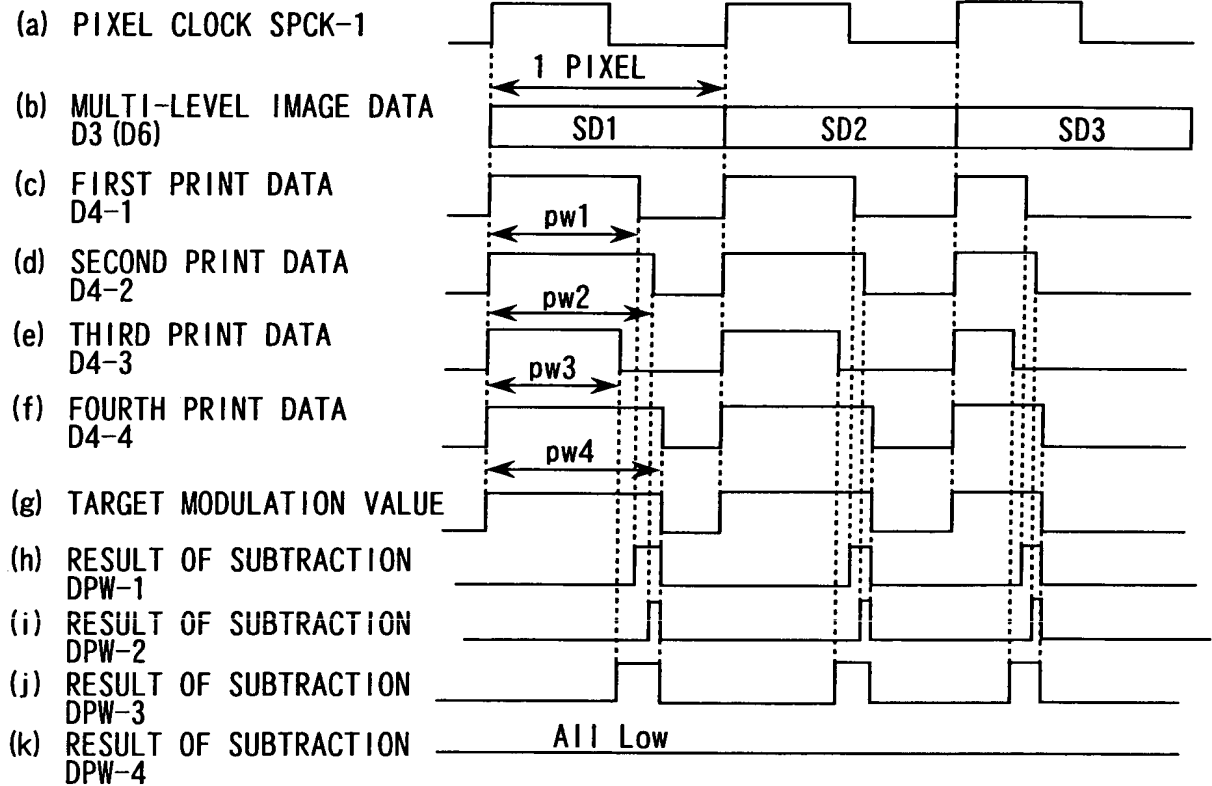


FIG.69

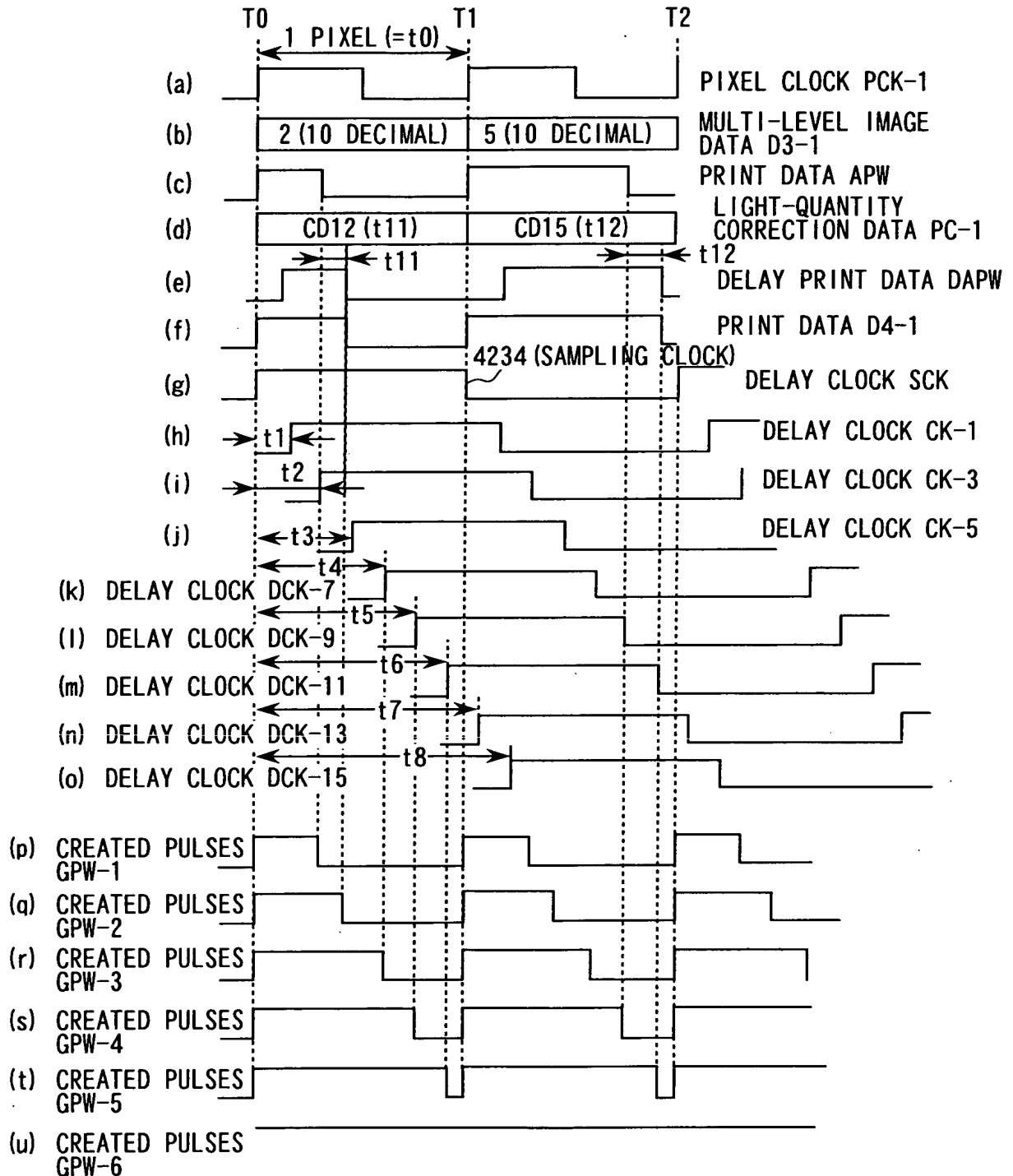




FIG.70

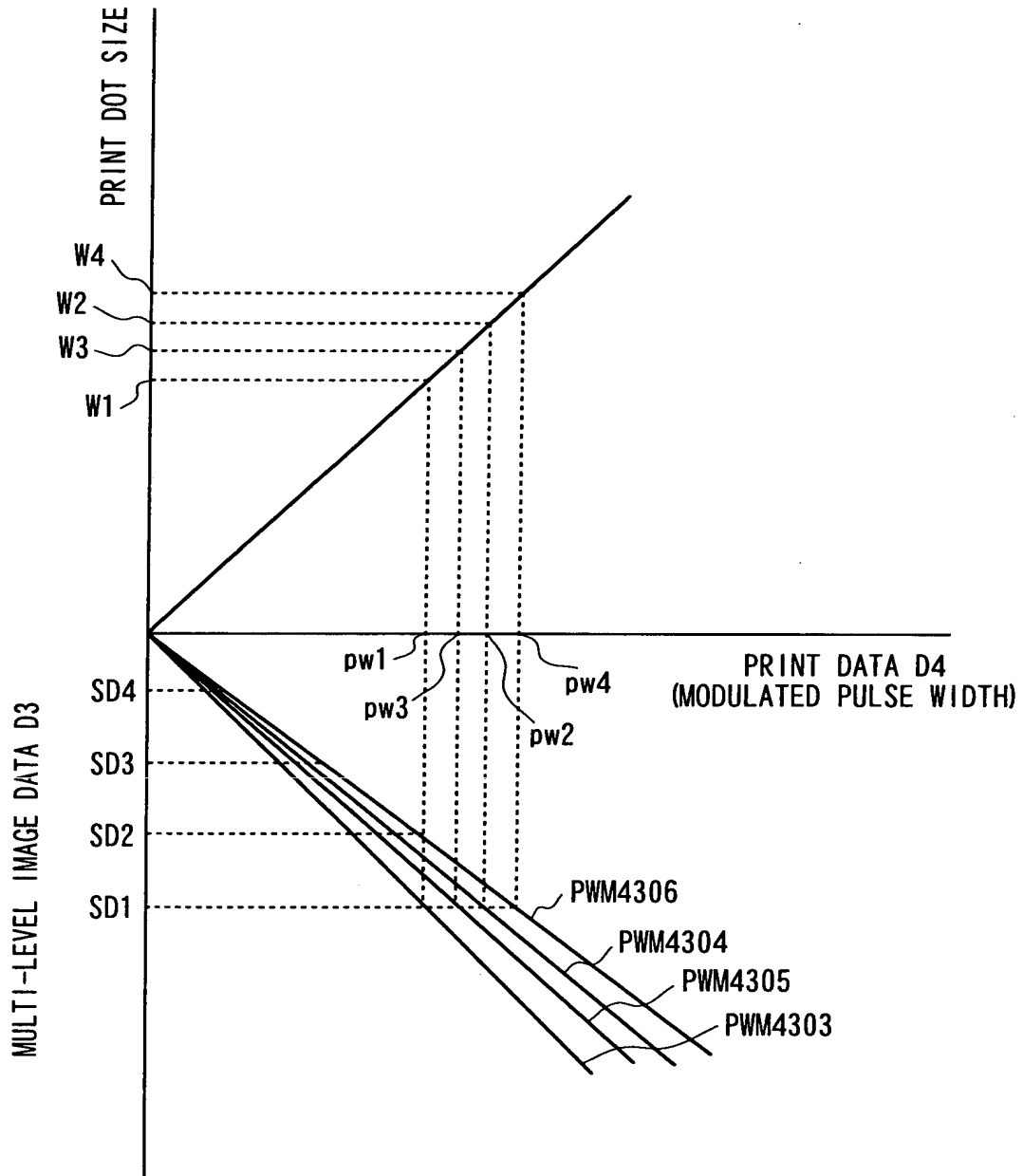


FIG.71

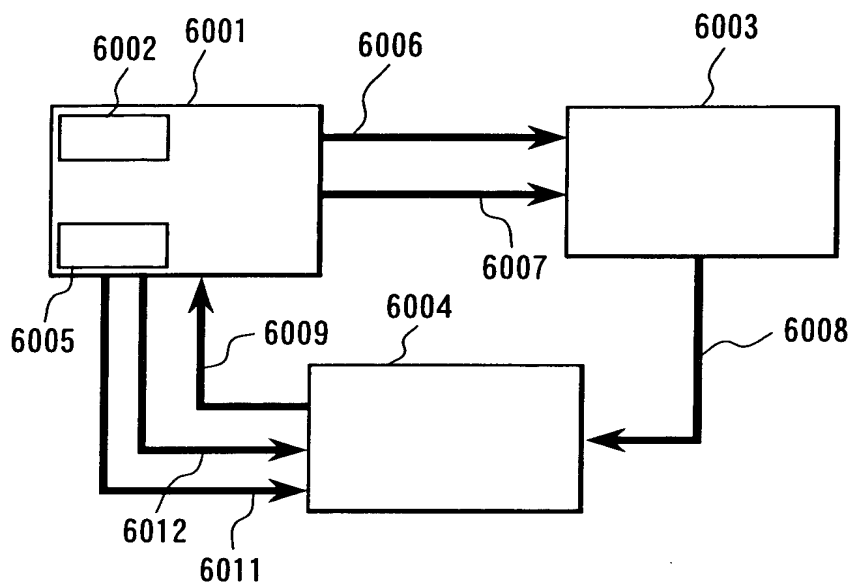


FIG.72

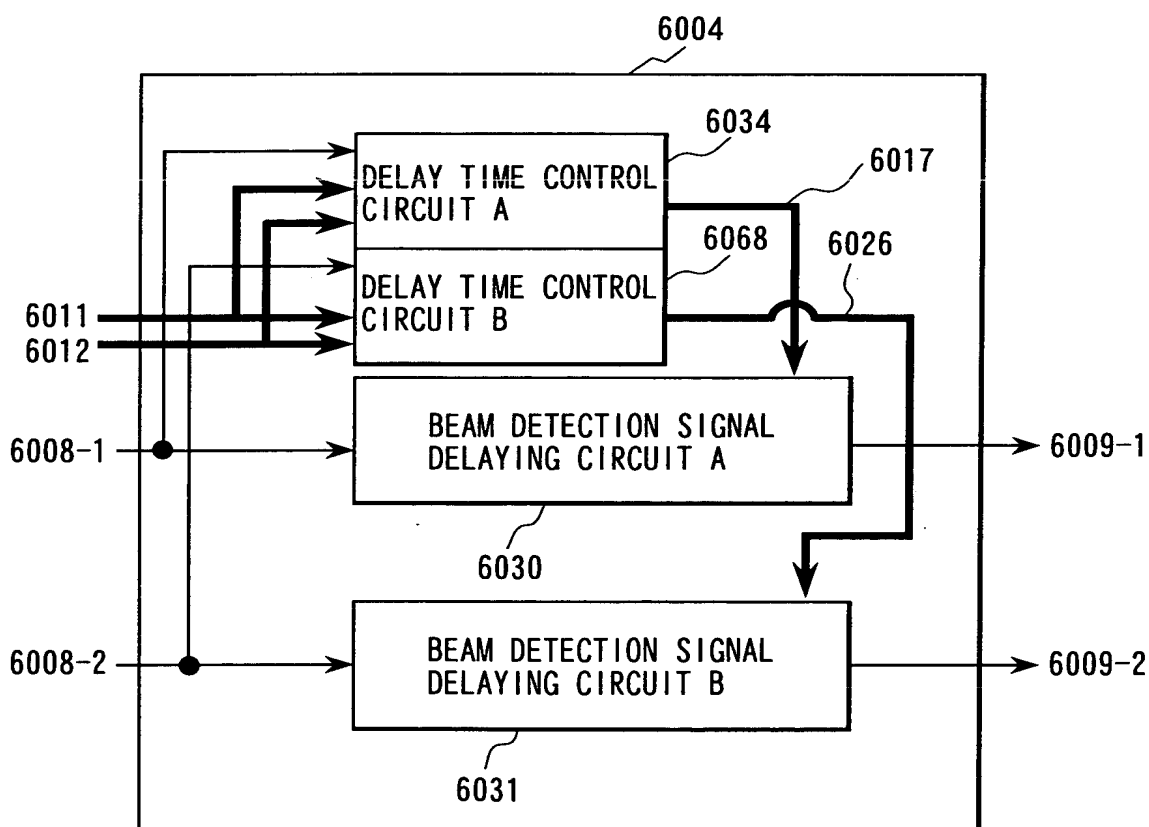


FIG.73

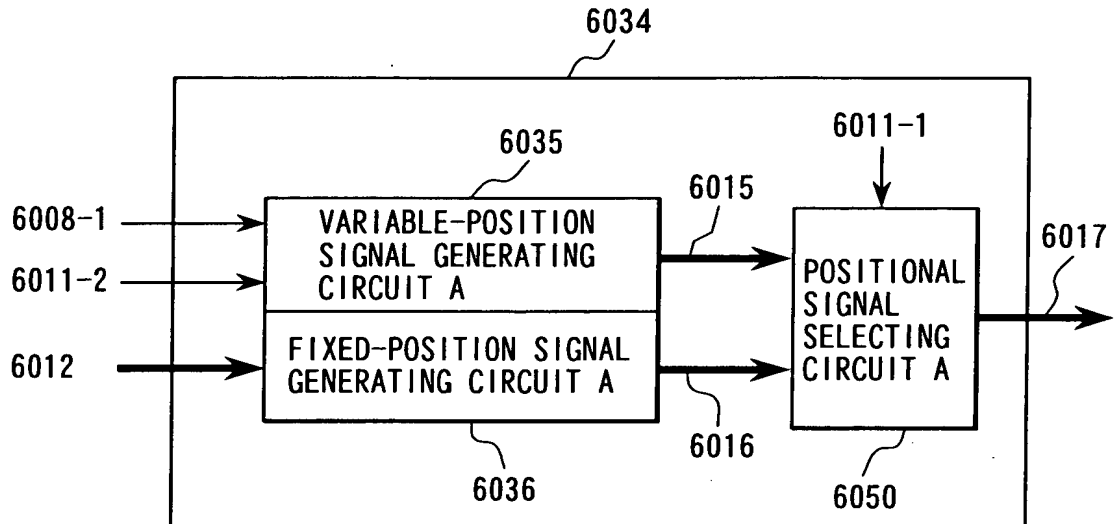


FIG.74

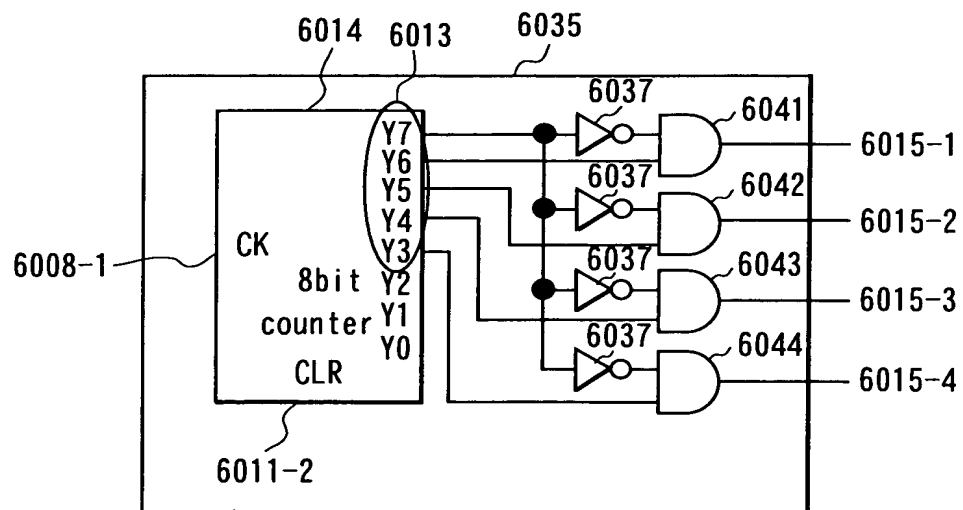


FIG. 75

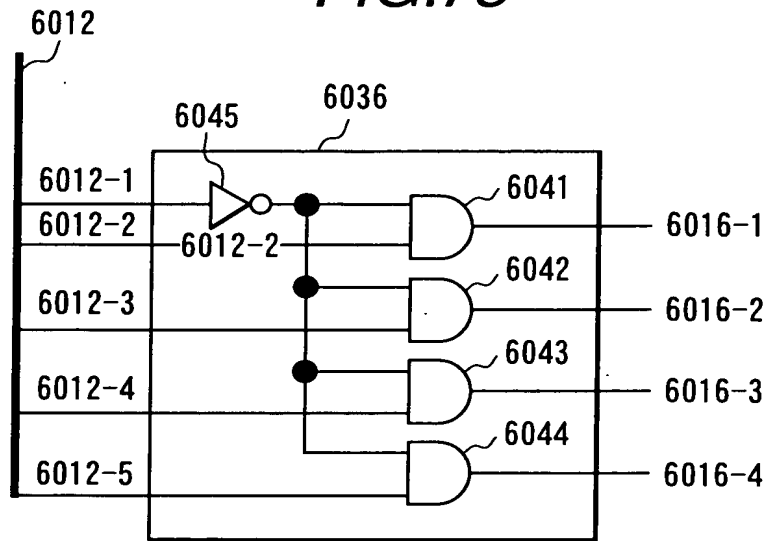


FIG. 76

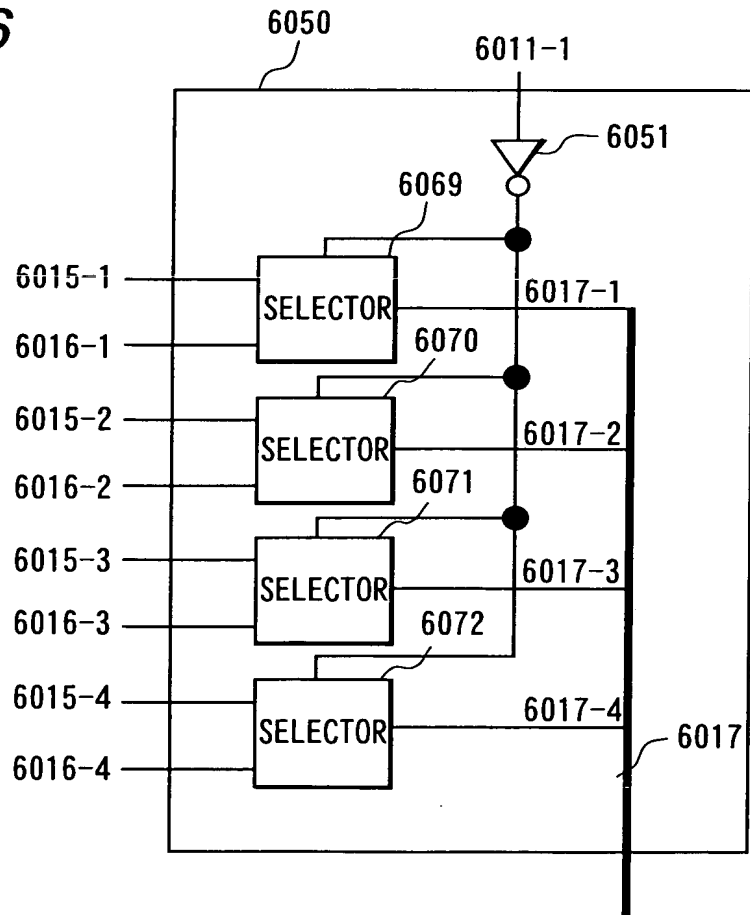
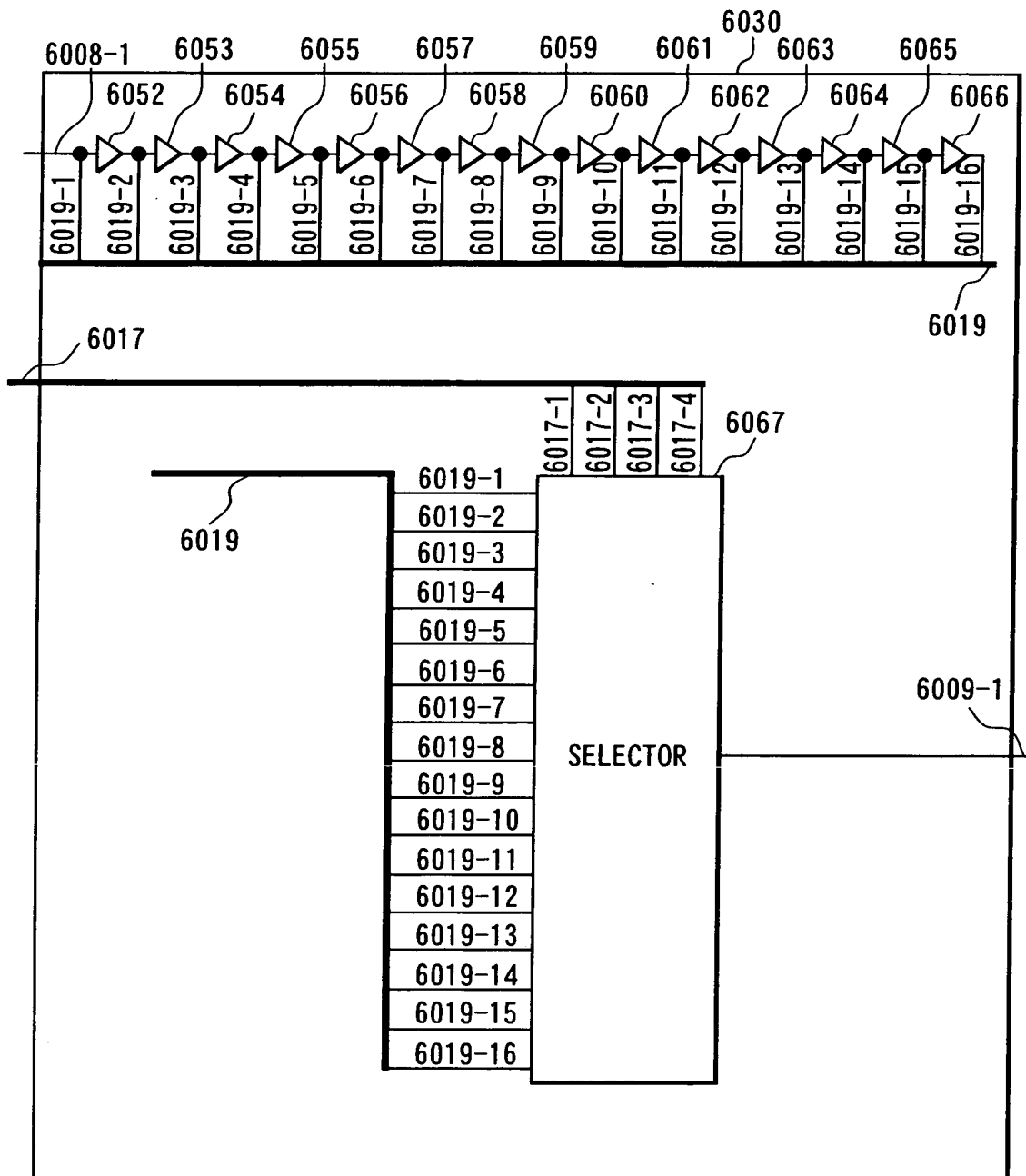


FIG. 77



SCANNED

FIG.78

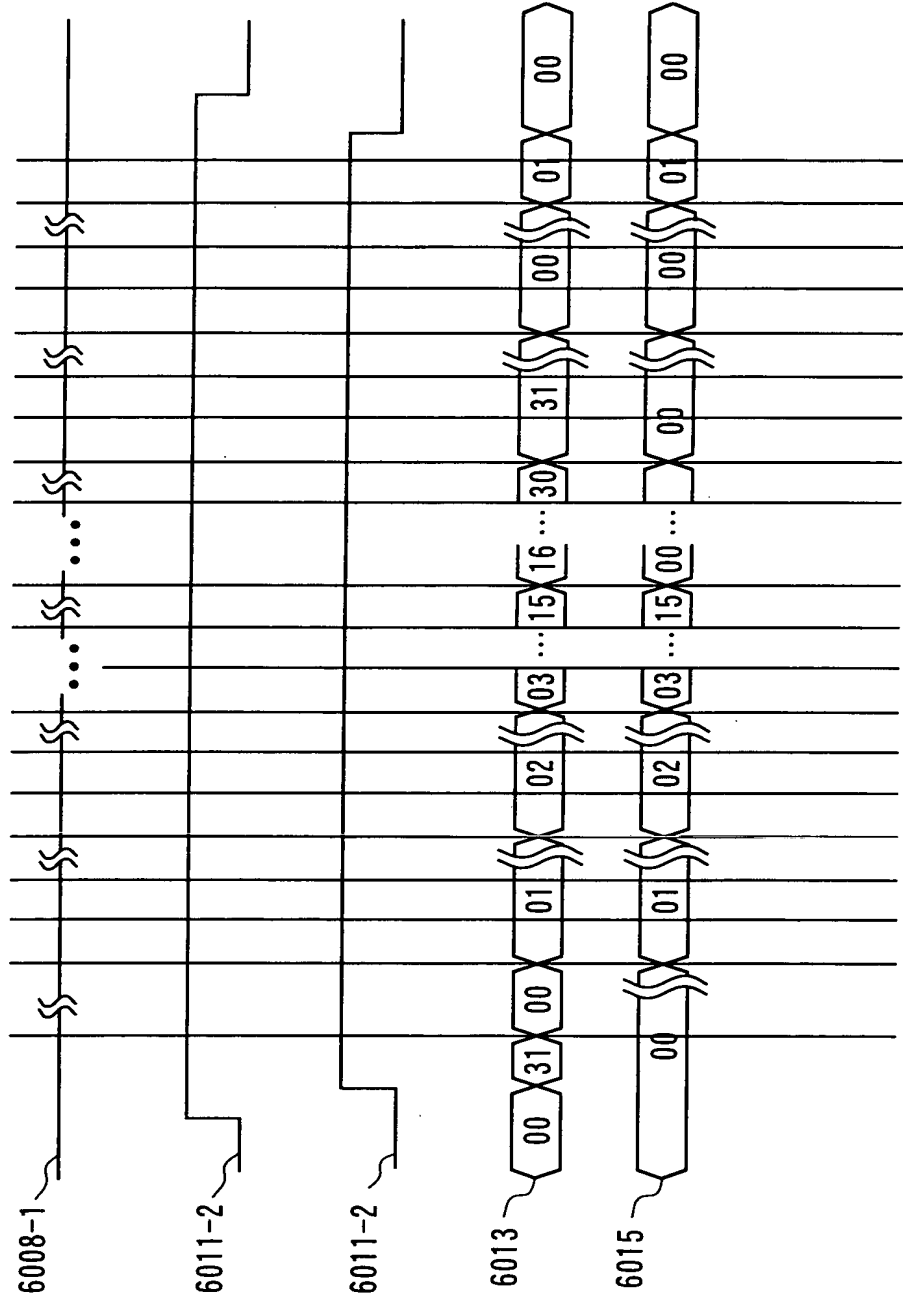


FIG.79

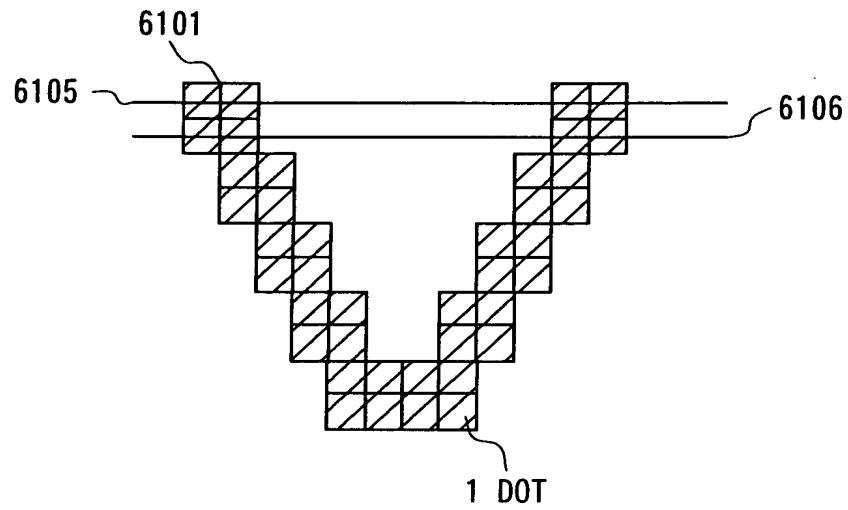
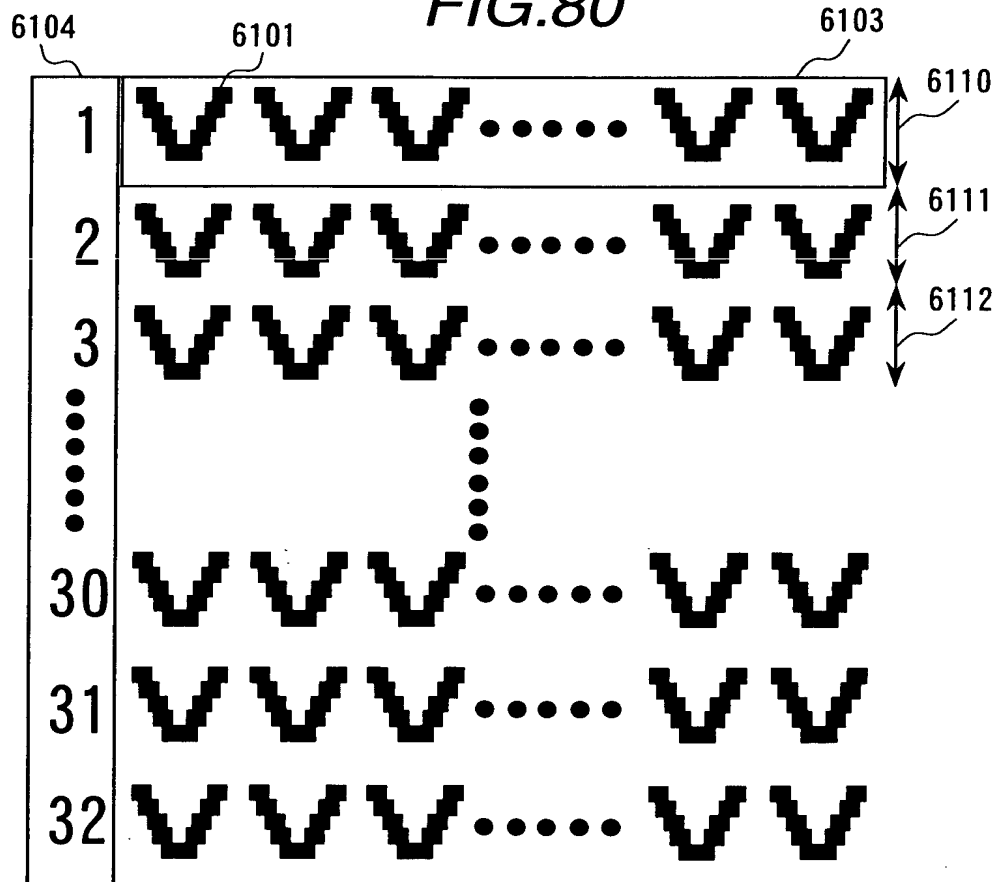
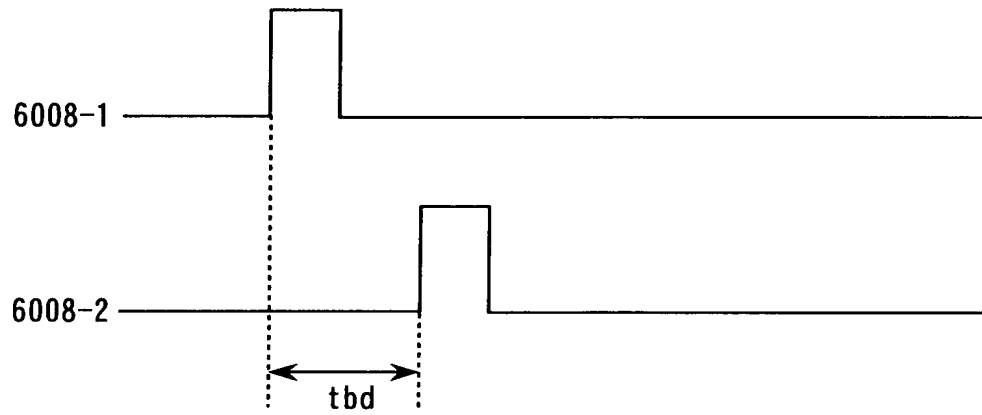
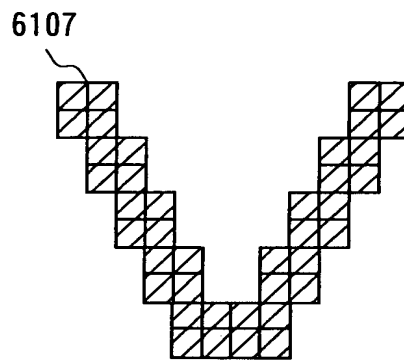


FIG.80



SCANNED 1

*FIG.81(1)**FIG.81(2)*



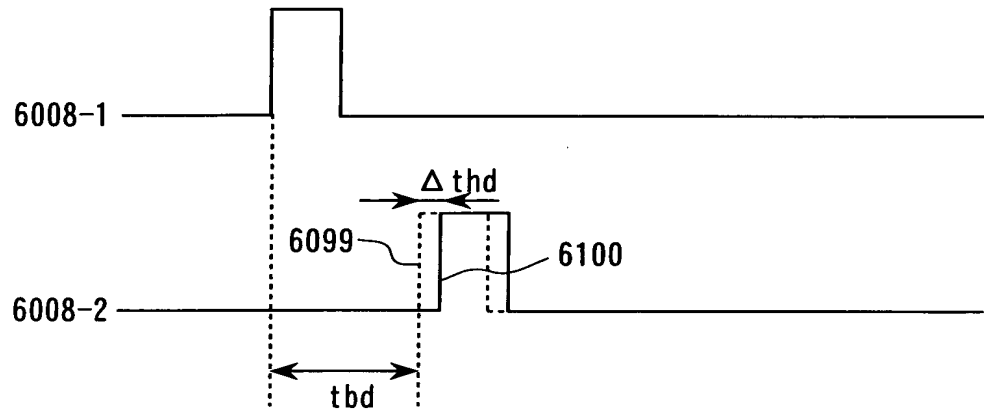
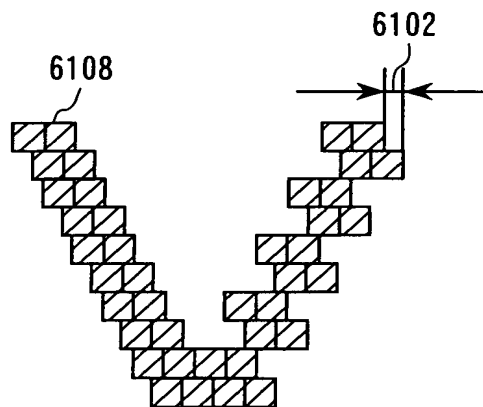
*FIG.82(1)**FIG.82(2)*

FIG.83(1)

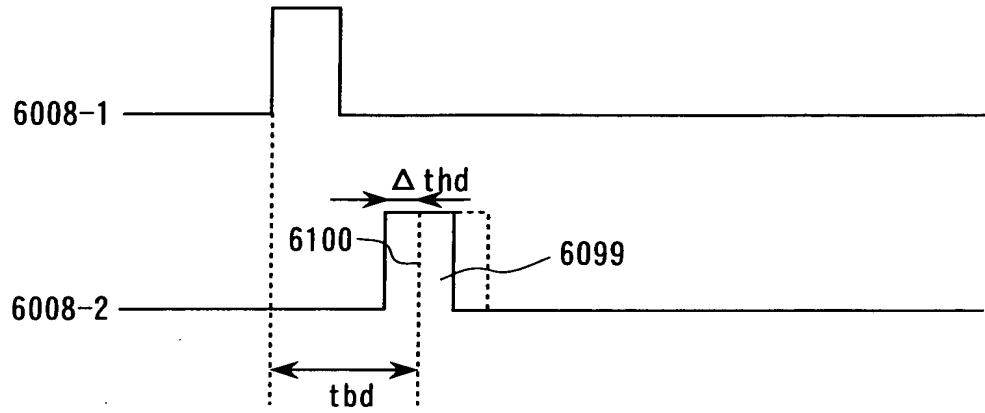


FIG.83(2)

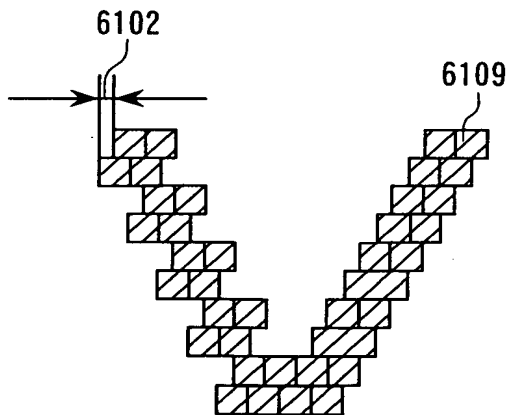


FIG.84

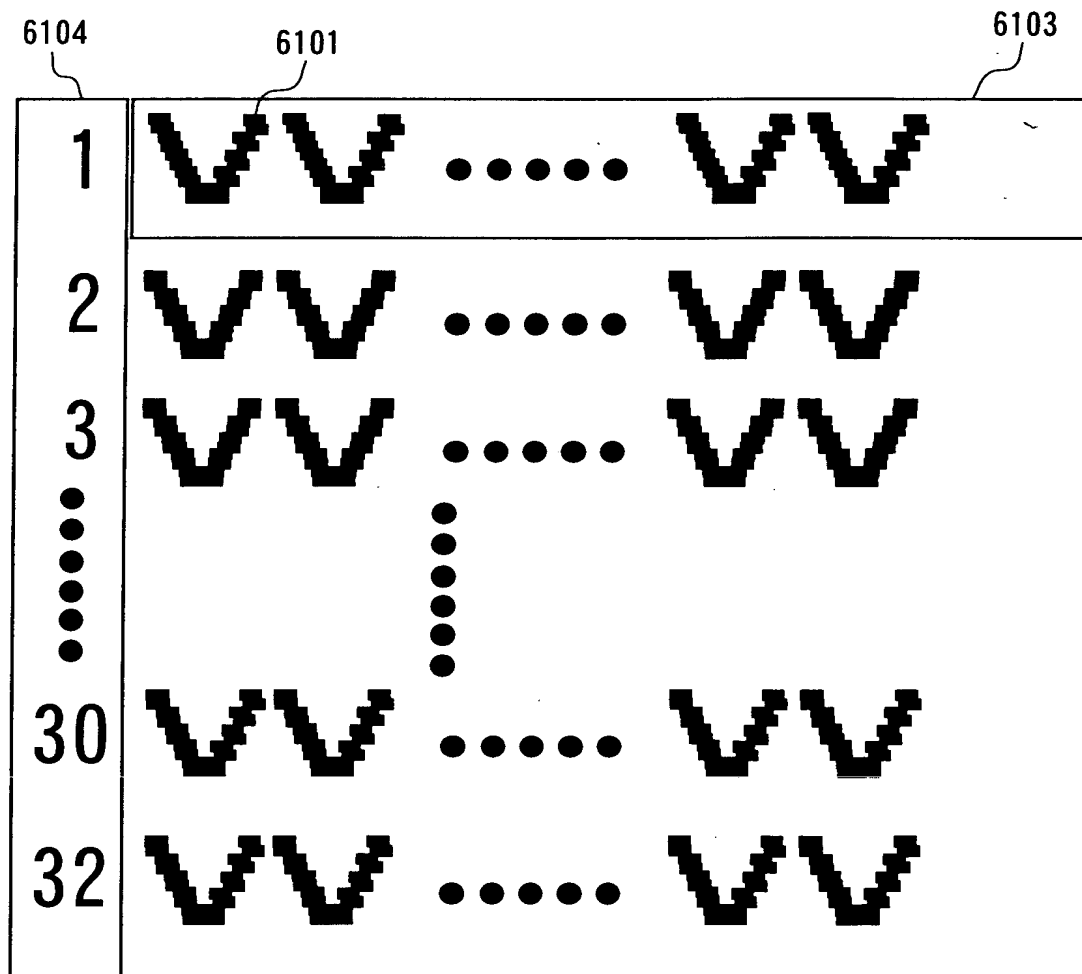


FIG.85

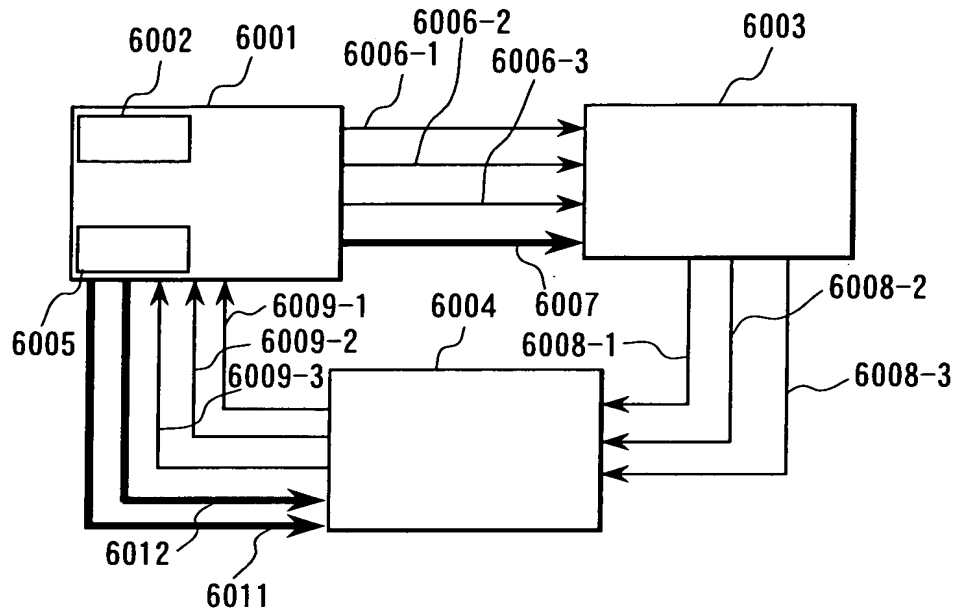


FIG.87

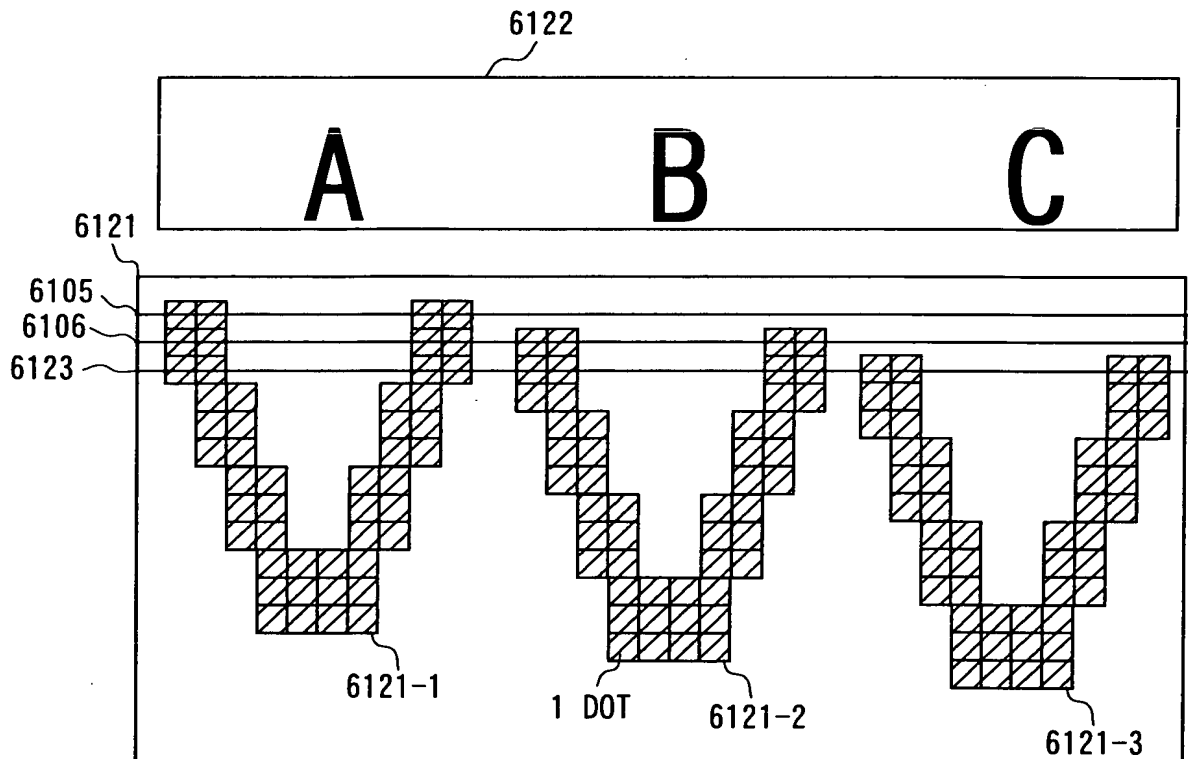


FIG.86

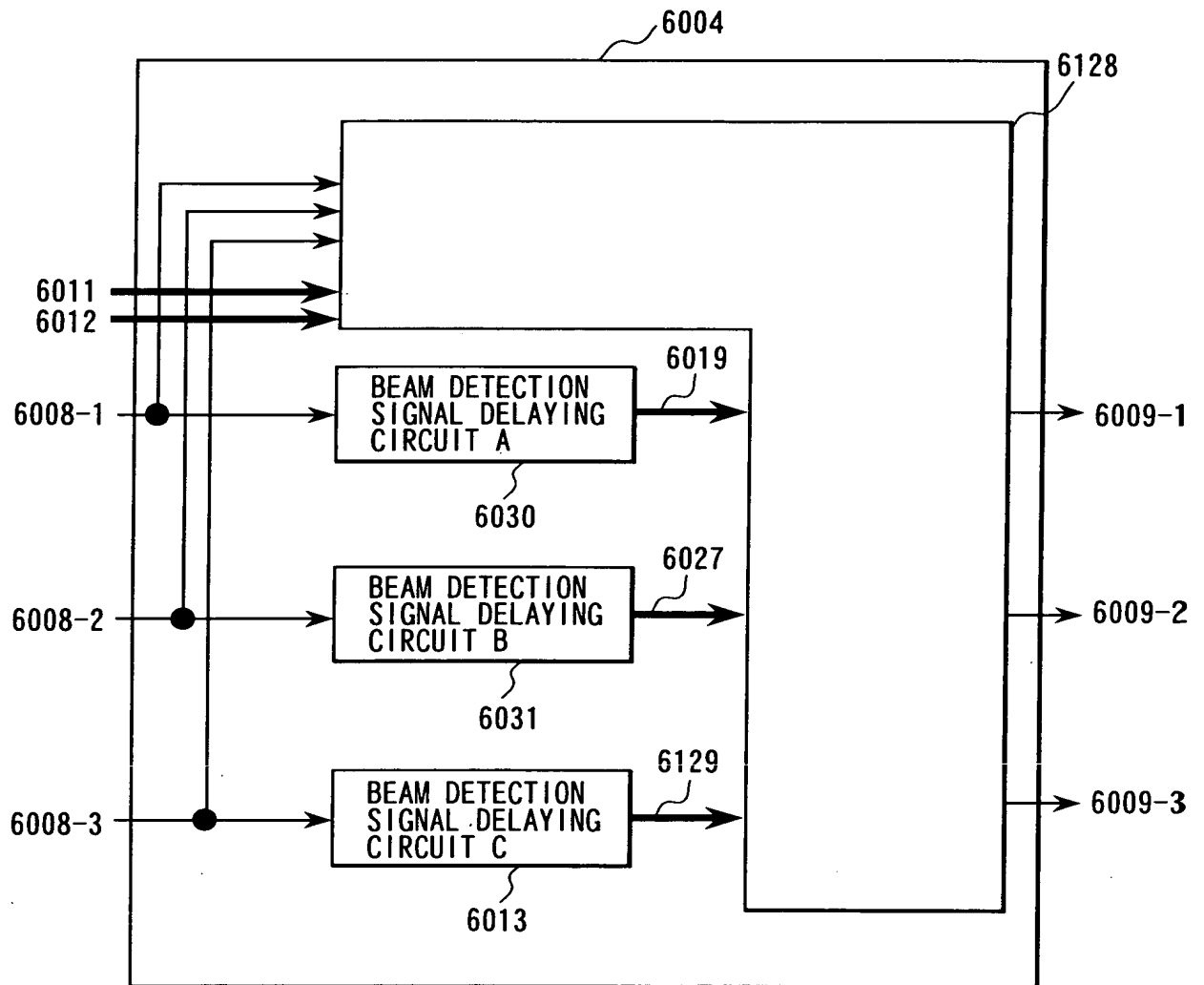


FIG.88(1)

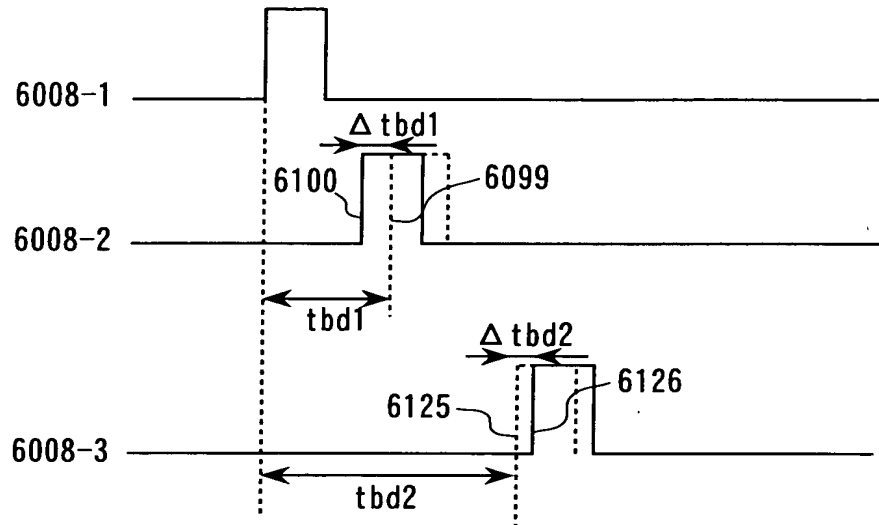


FIG.88(2)

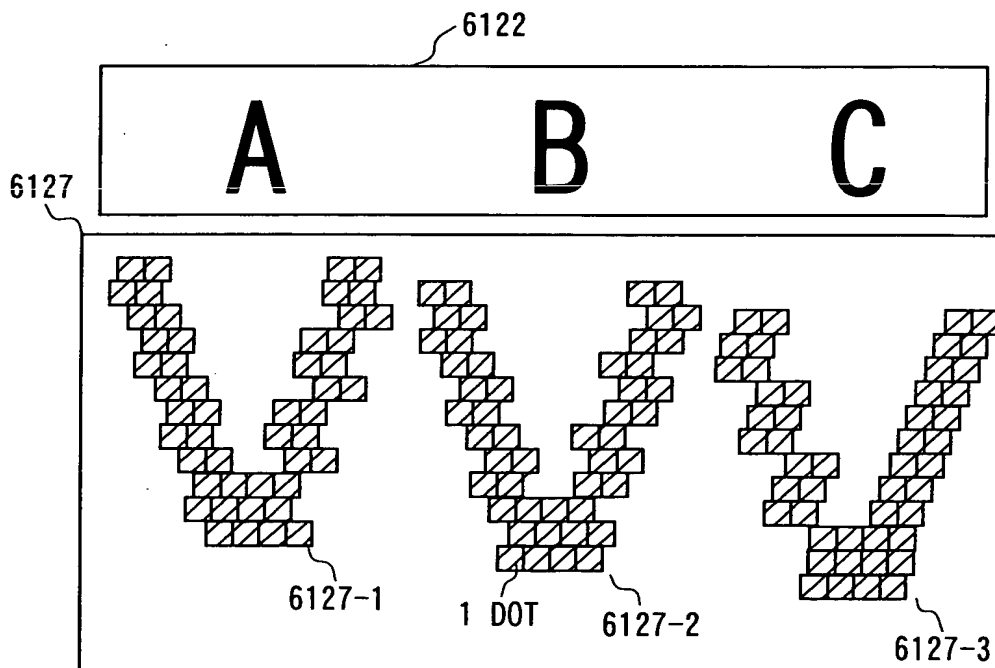


FIG.89

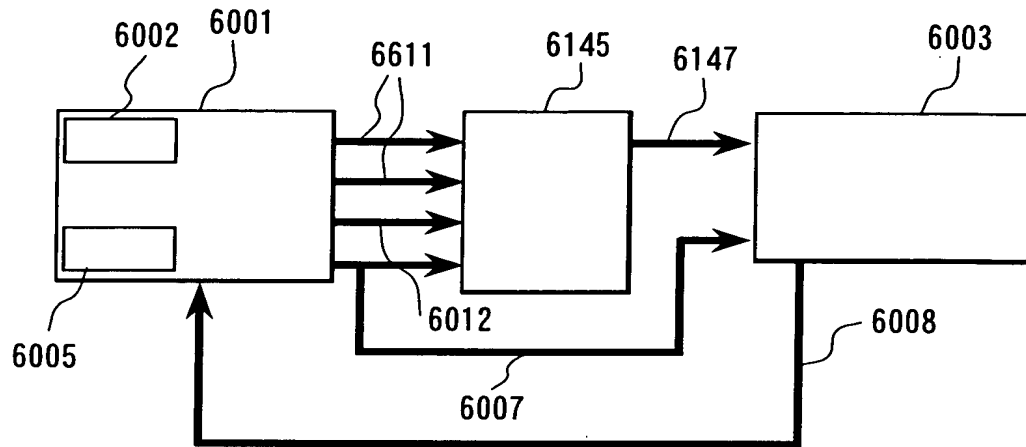


FIG.90

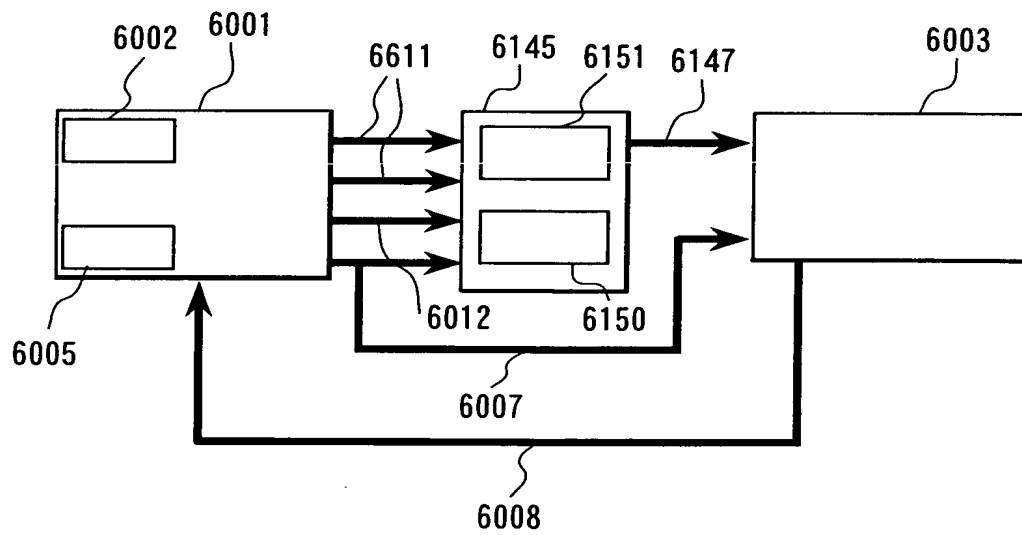


FIG.91

